

VOLUME 64
NUMBER 1

WHOLE No. 307
1950

Psychological Monographs: General and Applied

Combining the *Applied Psychology Monographs* and the *Archives of Psychology*
with the *Psychological Monographs*

HERBERT S. CONRAD, *Editor*

Patterns of Personality Rigidity and Some of Their Determinants

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Accepted for publication, June 10, 1949

Price \$1.00

Published by

THE AMERICAN PSYCHOLOGICAL ASSOCIATION
1515 MASSACHUSETTS AVE., N.W., WASHINGTON 5, D.C.

Psychological Monographs

General and Applied

Published by the American Psychological Association
1200 16th Street, N.W., Washington, D.C. 20036

HERBERT A. SIMON

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Aspects of Personality Rigidity and
Some of Their Determinants

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Psychological Monographs
No. 13, Vol. 13

THE AMERICAN PSYCHOLOGICAL ASSOCIATION
1200 16th Street, N.W., Washington, D.C. 20036

ACKNOWLEDGEMENTS

The writer is extremely grateful to Dr. David Shakow for his supervision and persistently helpful criticism of this research over a period of more than a year. Special thanks are due also to Dr. Forrest Kingsbury, Dr. James Miller, Mr. John Butler, and Dr. William Stephenson for criticism and comment at various stages in the development of the project.

The writer is grateful to the following individuals for aid in obtaining subjects: Mr. Leroy Wauck, Chicago State Hospital; Dr. Phyllis Wittman, Elgin State Hospital; Dr. Louis Steinberg, Elgin State Hospital; Dr. Julian Pathman, Illinois Neuropsychiatric Institute; and Dr. Allen Rosenwald, Illinois Neuropsychiatric Institute.

SEYMOUR FISHER

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CHAPTER I

HYPOTHESIS AND PURPOSE

ONE of the most striking deficiencies in previous studies of personality rigidity phenomena revolves about the fact that with but a few limited exceptions they have all confined themselves to measuring rigidity in terms of very simple motor or perceptual factors. No attempt has been made to sample rigidity behavior simultaneously at different levels of complexity or at different levels of emotional involvement. Consequently, there has been little basis for deciding such fundamental questions as to how generalized rigidity may be in the individual personality or whether there are distinctly different kinds of rigidity. This failure has at least in part been due to the fact that no one has formulated a general hypothesis which would define what is common to rigid behavior at different levels. For example, one may easily say that perseverative behavior is a *sign of rigidity* when the performance of some simple motor task is involved; but how does one apply this kind of simple perseveration concept to the detection of rigidity in such complex behavior as an individual's aesthetic preferences or his interpretation of an event with emotional significance? The present study was undertaken to attack some of these problems—to explore in a broader sense the whole question of personality rigidity. In line with the above discussion it was necessary first of all to develop a hypothesis that would define how rigidity might manifest itself in diverse responses to diverse materials. A presentation of this hypothesis and of the specific objectives of the study follow.

The hypothesis that forms the basis for the measurement procedures utilized in

this study is that there are persistent personality rigidity trends which are relatively independent of intelligence.¹ It will be assumed that such rigidity trends reveal themselves in the degree to which any given individual is able to indicate in some *behavioral way* his ability to utilize *alternate modes of response* when dealing with problems or situations requiring adjustment. That is, it is postulated that given, for example, two individuals, A and B, of equal formal intelligence, who are faced with the necessity of solving some problem with perhaps six alternative modes of solution, that A will be able to utilize all six of the possible modes of solution, and B will utilize perhaps only two of them, because of personality differentials in rigidity. In these terms an individual's rigidity in expressing aesthetic preferences, or his rigidity in interpreting a picture with emotional meaning, or his rigidity in sorting varied geometric objects into different classes are all measurable on a related continuum—viz., the *number* of his aesthetic preferences, the *number* of his equivalent picture interpretations, and the *number* of his equivalent sortings. This reduction of the measurement of rigidity to *number* of equivalent alternatives utilized is a simplification dictated by the needs of experimental control; but it is also a kind of simplification that is based on a concept that has been implicit in almost all past rigidity measures.

¹That is, intelligence in a limited formal or psychometric sense. It is recognized that intellectual factors pervade most areas of reaction. The assumption here is that intelligence in the formal sense is not significantly related to rigidity behavior resulting from the particular character of the personality structure.

It is important that it be clearly understood to what degree this brief hypothesis really does neglect the complexity of factors involved in rigidity phenomena. One suspects that if sufficiently sensitive measuring instruments were available, it would be possible to analyse rigidity phenomena in many different dimensions. Thus, *hypothetically* one might be able to measure rigidity as it affects *perception* of situations, as it affects *subjective reactions* to situations, and of course as it affects *overt behavioral* reactions to situations. Furthermore, one might be able to describe rigidity in each of these dimensions in terms of a large number of descriptive continua (e.g., quickness with which evoked, degree of persistence after arousal, and degree of generalization). Ideally, it would be well to measure as many of these phases of rigidity as possible. But it has been necessary here to treat the problem in a simpler fashion: to confine postulations to *overt* behavioral manifestations of rigidity and to limit them to rigidity manifestations conceived to exist on a single restricted continuum (*viz.*, number of utilized alternatives). This has been true simply because there are so few known techniques available for getting at rigidity phenomena in any dimension and because the demands of experimental control place a limit on the number of variables one may consider simultaneously.

Of course, the emphasis that has been placed here upon the overt behavioral aspects of rigidity phenomena is not entirely the result of limitations raised by experimental control and available modes of measurement. It seems to be justified to some extent by the fact that in everyday situations we judge others

to be rigid or flexible in terms of their overt behavior. The flexible person shows that he is flexible by dealing with situations in a manner that can be described as "flexible." The rigid person actually *behaves* rigidly in his overt response to various stimuli. Indeed, it is questionable whether mere subjective awareness of alternatives in a situation is a significant index of personality flexibility.

This project has the following objectives:

1. To set up a battery of choice or problem situations in which there are *variable numbers of roughly equivalent modes of response*, and then to determine whether individuals show any measurable difference in the degree to which they utilize *few or many alternatives* from *situation to situation*. The range of situations used in the battery is such as to include reactions to materials varying in meaningfulness, complexity, and emotional involvement.
2. To relate any observed individual consistencies in grasping and utilizing alternatives to measures of personality. The personality measures include the Rorschach test and Guilford's² STDCR (12).
3. Furthermore, to determine whether observed rigidity consistencies are correlated with different "types" of functional maladjustment. This is attempted by using subjects who are psychiatrically diagnosed as conversion hysterics, and paranoid schizophrenics, and also normal subjects.

Summarizing and restating the above in another form, it may be said that the

² A questionnaire which contains 175 questions pertaining to subjective feelings, degree of social participation, mood changes, etc. It presumably measures five personality factors.

study aims at answering such questions as the following:

1. Are individuals *consistently* rigid? That is, do they show a *constant level* of rigidity that cuts across a wide range of their responses?

2. Are there distinctly *different kinds* of rigidity? If so, what is the relative importance of each in the personality structure?

3. Do individuals who are in general emotionally constricted (as indicated by the Rorschach test) show a correspond-

ing rigidity in other phases of their behavior?

4. Does an individual's manner of describing himself (as indicated by the Guilford STDCR) have any relationship to rigidity?

5. Do neurotics show specific rigidity trends not manifested by normal subjects? In what way is the rigidity of the paranoid schizophrenic similar to, or different from, the rigidity of the conversion hysteric?

CHAPTER II

SUBJECTS

SIXTY subjects participated in the project. They comprised three distinct groups: twenty normals, twenty conversion hysterics, and twenty paranoid schizophrenics. To hold the sex factor constant only women subjects were used. An attempt was made also to keep the intelligence factor relatively constant by selecting only those persons whose intelligence scores fell roughly within the 95 to 110 IQ range. Actually, when final IQ means were computed for each group it was found that the normal subjects exceeded the hysterics by six points and the paranoids by almost five points. There was not a significant difference between the paranoids and hysterics. As will be shown later, the influence of the intellectual factor on the total results was negligible. Each group will now be described in detail.

Normals

The normal group consisted of nine women who were in their third or fourth year of training as occupational therapists; five student nurses in their last year of training; two student social workers in their first year of graduate work; and four individuals employed as stenographers in a hospital setting. The age range was from 20 to 45—with the majority falling in the twenties. The stenographers in the group were obtained when they responded to a posted notice, but all others were selected from larger available groups because they fell within the 95-110 IQ range. No attempt was made to screen the group in advance for possible pathology. It was assumed that the individuals in the group were "healthy" or "normal" because they were not hospitalized and appeared to be functioning at their particular jobs without any gross signs of maladjustment. In general, the participants were all very cooperative during examination and expressed much spontaneous interest toward various of the tasks. At no time was the real purpose of the testing revealed. The various procedures were simply described as a series of tests that were being given to different groups for comparative purposes. With but a few exceptions all testing was completed in one session.

TABLE I
DISTRIBUTION OF AGE IN YEARS, EDUCATION IN YEARS, INTELLIGENCE,
AND OCCUPATION IN THE EXPERIMENTAL GROUPS
(*N* = 60 Women)

Group	Age		Intelligence		Education		Occupation
	Mean	Range	Mean	S.D.	Mean	Range	
NORMALS	24	20-45	107.2 ^a	3.8	15	12-16	9 occupational therapy students 5 student nurses 2 student social workers 4 stenographers
CONVERSION HYSTERICs	35	18-50	100.6 ^b	4.9	10	8-12	9 housewives 4 stenographers 7 in miscellaneous factory and clerical work
PARANOID SCHIZOPHRENICS	37	21-55	102.6	5.3	10.8	7-16	10 housewives 5 clerical workers 1 florist 4 miscellaneous factory work

^a Exceeds hysterics and paranoids significantly.

^b Not significantly different from the paranoids.

Hysterics

The hysteric group consisted of twenty women who had been diagnosed "conversion hysteria" at the Illinois Neuropsychiatric Institute. Nineteen of these women were outpatients and one was an inpatient. The age range was from 18 to 50, with the mode in the late thirties. A wide variety of occupations was represented in the group; but the "housewife" category tended to predominate. The educational level of the group was significantly inferior to that of the normals; and a year or two of high school was the most frequently indicated. Most of the group was told that the testing procedures represented part of the routine psychological testing program for patients. However, in some instances due to special circumstances the testing was represented as an "experimental project with particular interest in your type of case." The general level of cooperation in the group was good. In the few instances where subjects showed themselves to be unusually uncooperative testing was discontinued and the results

were not used. For about half of the subjects it was necessary to utilize two separate sessions before the test series was completed.

Paranoids

The paranoid group consisted of twenty women psychiatrically diagnosed paranoid schizophrenics. Nine of these subjects were obtained at Elgin State Hospital, five at Chicago State Hospital, and six from the Illinois Neuropsychiatric Institute (three inpatient and three outpatient). The age range was from 21 to 55, with a mode in the late thirties. The educational and occupational representation was similar to that of the hysteric group. The general level of cooperation was significantly poorer than was the case with the other groups. Of course, all subjects used were sufficiently cooperative so that they were willing to undergo a number of hours of testing. Most of the group required at least two sessions and several as many as three sessions before testing could be completed.

CHAPTER III

GENERAL PROCEDURE AND MEASUREMENT TECHNIQUES

A. PROCEDURE

THE actual procedure used in the examination of each subject was somewhat as follows:

1. Each individual subject was first given the verbal section of the Wechsler-Bellevue to determine if the intelligence level was within the average range.
2. A Rorschach record was then taken.
3. After the subject had had a brief rest period, the battery of rigidity measures was administered (in the same order as they are described below).
4. Finally, the subject was asked to fill out the Guilford STDCR.

The total time of examination ranged from three hours to seven hours—with a mode of about three and one-half hours. In all instances where subjects seemed fatigued extra rest periods were introduced. The longer examinations were always spaced over a two or three day period.

B. MEASUREMENT TECHNIQUES

The tasks finally included in the rigidity battery were selected to represent a scatter of situations ranging from those in which the subject deals only with very simple stimuli and a limited number of alternatives, to those in which the subject deals with very complex stimuli and multiple alternatives. Furthermore, they were selected to include tasks varying widely in the degree to which they might "involve" the subject in an emotional sense. Thus, there are two parameters running through the tasks: A *complexity parameter* and an *emotional involvement parameter*. It is important to note that a large number

of *overlapping* tasks are employed so that possible failure of any single task to function as a rigidity measure in any individual case will be compensated for by the presence of other overlapping tasks. It should be added that a preliminary test of nineteen tasks was undertaken with ten subjects. Those were retained in the final battery that represented the easiest to administer and seemed to provide the best measure of rigidity.

Each task in the rigidity battery will now be described.

1. *Vigotsky Blocks*

The Vigotsky blocks consist of 22 wooden objects of various forms, colors, and shapes. (16, pp. 462-484). Each subject is instructed: "Show me all of the different ways these blocks can sensibly be divided into groups. Show me one way; then another—until you've shown me all of the ways you can think of." Scoring is based on the number of such groupings he is able to make. The specific details on scoring may be found in Appendix I.

2. *Colors*

Each subject is asked to express his liking for each of eighteen colored ribbons of varied hues and patterns and about four inches in length. As each ribbon is presented separately to the subject, he is asked: "Do you find the color of this ribbon to be pleasing or not pleasing? Do you like it or not like it?" The number of ribbons reacted to favorably constitutes the final score. It is here assumed that limitation in number of positive or favorable reactions is a measure of at least one aspect of rigidity.

3. *Trait Judgment*

The subject is presented successively with several series of pictures of persons—each series consisting of ten pictures. In the first series the subject is told: "Select all those pictured individuals that appear to be *friendly*." In the second he is instructed to select all those that appear to be *ambitious*; in the third all those that appear to have a *sense of humor*; in the

fourth all those that appear to be happy; and in the fifth all those that appear to be intelligent. It is assumed that although pictures actually afford some valid criteria for making the above judgments, that the restrictiveness and criticalness of judgment for each series is to a significant degree a function of rigidity trends. The number of pictures accepted as belonging to each trait category constitutes the final score.

4. Comparison of Self with Pictured Persons

Series 1.—The subject is shown successively a series of thirty pictures of different women. The subject is then told: "As I show you each picture tell me whether you think the person shown in the picture is a person like yourself—whether she has the same kind of personality as yourself." Additional instructions are given about disregarding any similarities in physical appearance between the pictured person and the self and concentrating on a general impression of the personality of the person represented. The number of pictures that the subject is able to accept or perceive like himself constitutes the total score.

Series 2.—The subject is shown successively fourteen distinctly unpleasant pictures of women taken from the Szondi (24) series and is asked to decide in each case whether the person shown is:

- (a) "Quite a bit" like the self;
- (b) "A little bit" like the self;
- (c) "Not at all" like the self; or

(d) Whether it is impossible to reach a decision about the picture in question. These instructions were given orally; and repeated as many times as necessary until it was clear that the subject comprehended them.

Scoring of the judgments is based on a weighting system that credits +3 for answer "a"; +2 for answer "b"; +1 for answer "d"; and 0 for answer "c." It is assumed that the greater the total score, the less the rigidity that is manifested.

5. Thematic Apperception Test

a. The subject is shown successively each of ten TAT cards. He is instructed: "Tell me all of the different things this picture might sensibly represent. What are the different things that might be happening in the picture?" Particular care is taken to motivate the subject, to make him feel that he should give as many interpretations as possible. The total score is based on the number of interpretations offered—but qualified in terms of plot quality and also the degree of *difference* of those interpretations

given for the *same* TAT card. Details of the scoring system may be found in Appendix II.

b. The subject is shown the same ten TAT cards. In each instance he is asked to select from a *printed list of alternatives* (six per TAT card) all of the various kinds of situations that the card might sensibly represent. The total score is based on the number of alternatives selected by the subject.

6. Annoyances

a. Each subject is told: "I am going to read a list of things to you that people sometimes find annoying. As I read each thing to you, tell me whether you find it annoying." A list of twenty-eight annoyances is read to the subject one at a time. The supposition underlying this procedure is that the individual who is least open to grasping alternative ways of interpreting or dealing with situations will tend to react to an unusually large number of aspects of persons and things in an unaccepting (or annoyed) fashion. Clearly, rigidity is here not so directly definable in the form of a simple "number of selected alternatives." Rather, there are more intervening assumptions—the principal of these being that personality rigidity will reflect itself to at least some degree in limitations of outlook and a greater tendency to be rejecting of that which is "different" or new. The total score is the sum of indicated annoyances, and the larger the score the greater the degree of rigidity.

b. Each subject is also asked to select from the same list all those which he thinks "most people" find annoying. When the task is performed with this frame of reference, the total score is based on the number of annoyances ascribed to "most people." The same logic lies behind this procedure as indicated for "self annoyances." However, interest is focused on the rigidity shown when a new, forced frame of reference is involved.

7. Range of Interests

a. Each subject is instructed to select from a list of thirty-seven different activities (e.g., swimming, dancing, etc.) which are read to him one at a time all those he feels he enjoys doing *very much*. He is told: "I am going to read a list of activities to you. Tell me which of them you enjoy doing *very much*." The same rationale lies behind this procedure as for the use of annoyances as a measure of rigidity. The total score consists of the number of indicated interests. The greater the number of interests the smaller is the degree of rigidity.

2. Each subject is also asked to select from

the same list all those he feels "most people" enjoy doing *very much*. When the task is performed with this frame of reference, the total score is equal to the number of interests ascribed to "most people."

8. Rosenzweig Picture Frustration Test (19)

This test contains a series of cartoon situations in which one person says or does something to frustrate another person. The subject usually writes in a designated box what he thinks the frustrated person would say in response to the frustration. Fourteen of these cartoon situations are used. The subject in each instance selects from a list of five alternative printed responses those that he thinks he himself might make under the circumstances. The instructions are: "In each case tell me all of the things in the list that you think you might say if you were in that situation and had to answer the other person." In each printed list the responses are derived from norm lists published by Rosenzweig.

It is clear from Rosenzweig's data that a wide range of responses is possible in each cartoon situation, and so to a large extent restriction as to choice of likely responses is assumed to be a rigidity function. The final score is equal to the number of alternatives selected by the subject.

9. Blots

The subject is shown a series of twenty-one ink blots taken from the Terman M-F (25). As he views each blot he is asked to select from a printed sheet containing a listing of possible things the blot might represent (five alternatives per blot) all of the things that he thinks the blot could sensibly be said to represent. The instructions are: "In each case pick out from the list that goes with the ink blot all of those things that you think it could sensibly represent or be." Since the alternatives for each blot are all rather logical possibilities, the number of choices accepted by the subject constitutes the final score.

10. Hand Steadiness Aspiration Task

The apparatus used here is a modification of that described by Dunlap (9). It consists of a series of 11 equally spaced holes of decreasing diameters drilled near the periphery of a circular

brass plate which can be rotated. The brass plate is mounted on a stand and is at about "chest level" for a subject in a sitting position. A stylus about 15 inches in length is fixed in front of the plate so that its tip is inserted in the third smallest hole. This stylus is on a pivot which allows it to move freely in any direction. The subject holds the stylus with his favored hand in any way he finds "most comfortable." The apparatus appears to be connected to a counter—but actually is not. Consequently, scores can be reported to a subject arbitrarily as the experimenter desires. The instructions to the subject are: "This is a test to see how steady you can hold your hand and also to find out how well you can estimate your own ability to do things. With your eyes closed try to hold this rod in the middle of the hole as steady as you can. At the end of each trial I will tell you how many times you actually touched the sides of the hole. Then, you will try to estimate in advance the number of times you will touch it on the next trial." He is then given a practice trial for thirty seconds with his eyes closed.

After the practice trial, ten regular trials are run. Before each trial the subject estimates what he expects to achieve; and at the end of the trial an arbitrary score, and yet one reasonable in terms of the possible achievement range, is reported to him. Following the first trial and for three further successive trials the subject is permitted to improve his performance progressively in terms of a predetermined pattern. Failure to raise or lower aspiration estimates is taken as the scoring basis. The reasoning underlying the use of this task is that on each trial the subject has the choice of a theoretically wide range of estimates clustering somewhere near the "real score" reported by the experimenter. Consequently, any resistance he shows to the acceptance of the full range of possibilities and any predilection he shows for "sticking to" his own *previous* estimates serve as an index of his inability to utilize a range of alternatives in his reactions to situations (especially those of a stress character). Three scores are derived from this task: (1) One indicating the amount of resistance to change when progressive improvement is reported to the subject; (2) One indicating the amount of resistance to changes when progressive decline in skill is reported; and (3) One indicating the degree of difference between rigidity for the first phase as contrasted with the second phase. See Appendix III for details of the scoring procedure.

CHAPTER IV

ANALYSIS OF DATA

A. VALIDITY CRITERIA

1. Rorschach

IN USING the Rorschach test as a validity criterion against which to compare results obtained from the rigidity battery, it was decided to work out three separate measures:

- a. A measure of personality rigidity.
- b. A measure of degree of total maladjustment.
- c. A measure of degree of pathological looseness or disorganization.

There are different ways in which one can approach the problem of evaluating Rorschach material. When using the Rorschach clinically, one usually attempts to grasp the various numerical scores obtained, in terms of total broad patterns or sub-patterns. Actually, the Rorschach literature contains abundant evidence that this is the most fruitful mode of analysis. However, since broad patterns are extremely difficult to express quantitatively, most controlled studies involving the Rorschach test have tended to rely on correlations of *single* scores (out of context of the total pattern) with other variables. Such analysis of isolated scores has generally been very disappointing and for this reason an attempt has been made here to define the Rorschach measures so that they retain some of the quality of *pattern* evaluation. This has been done by working out a scheme whereby individual scores are given different weights in terms of their quantitative relation to other scores.

The above procedure will become clearer as the specific scoring systems for evaluating rigidity maladjustment and pathological looseness

are described in detail. The deficiencies of such scoring systems must of course be kept in mind constantly. At most, they are only rough techniques of evaluation. They only touch on the complexity of analysis that goes into a careful *qualitative* consideration of a Rorschach record. Many complicated questions regarding relations of Rorschach factors would have to be worked out carefully in any project directed at Rorschach quantification per se; but these questions have necessarily received only a moderate degree of attention here. However, as will later be indicated, all of the scoring systems seem to be sufficiently differentiating to have possibilities as validity criteria.

a. The Rorschach measure of *personality rigidity* is based on a variety of Rorschach signs which clinically have been found to characterize persons who are habitually constricted and who find it necessary to deal with the environment with an unusual amount of guarded caution. Quite literally, these signs are derived from indicators of the degree to which individuals limit the range and character of their responses to the Rorschach ink blots. Thus, limitation of number of responses; limitation in the use of color in perceptions; restriction of percepts to one class of objects (e.g., animals); and very delayed reaction times are illustrative of what is considered rigid or restricted behavior in the Rorschach test. To construct a measure which would objectively convey the amount of Rorschach rigidity shown, a variety of the above described Rorschach signs were defined in terms of various scores (4) and given a series of specific weights. The particular rigidity signs selected and the weights assigned them were determined in an arbitrary manner based on general clinical experience. It is not possible to demonstrate that the signs or weights selected are the

truest measure of personality rigidity in the Rorschach sense. They were chosen to express what was qualitatively suggested in the Rorschach data obtained. It is likely that better weighting systems could be worked out; the one presented here is merely the best that could be developed under the conditions of this project. The value of this procedure is that it gives an independent measure of rigidity based on an instrument which has proved clinically useful. Thus, some frame of reference for evaluating the *rigidity battery* results is provided. The details of the scoring system may be found in Appendix IV.

The differences in Rorschach rigidity among the clinical groups are shown in Table 2. It may be noted that the normal group is significantly less rigid than either the hysteric or paranoid groups.

TABLE 2

CONSTANTS OF THE DISTRIBUTION OF RORSCHACH RIGIDITY SCORES IN THE THREE EXPERIMENTAL GROUPS, AND DIFFERENCES IN RORSCHACH RIGIDITY AMONG THESE GROUPS

	Normal	Hysteric	Paranoid
Mean	24.9	44.3	44.1
σ	11.8	17.2	13.6
σ_m	2.7	3.9	3.1
	Normals vs Hysterics	Normals vs Paranoids	Hysterics vs Paranoids
Mean Difference	19.4	19.2	.2
σ_D	4.7	4.1	5.0
C.R.	4.1	4.7	.1

The fact that no significant difference exists between the gross scores of the paranoids and conversion hysterics is consistent with results recently obtained by Angyal (3).

b. The Rorschach maladjustment score is also derived in terms of pattern criteria. A range of Rorschach signs

which are clinically recognized as indicating various degrees of personal maladjustment were selected. Each sign was given a weight in terms of its relation to other factors and its assumed importance for diagnosing maladjustment. Details of the scoring may be found in Appendix V. The manner in which the Rorschach maladjustment score differentiates the clinical groups is shown in Table 3.

The normal group is very well differentiated from both the hysterics and paranoids. However, it is clear that the hysterics and paranoids are less well differentiated, although still significantly in a statistical sense. Aside from defects in the scoring system used, some of the overlap may be attributed to the following factors:

1. Several of the hysterics are extremely maladjusted—perhaps bordering on incipient psychosis.
2. A number of the paranoids had been hospitalized for acute episodes which had occurred some time previous to the time of study and so might well have attained various stages of recovery.
3. It is generally recognized that paranoid disorders are difficult to detect on the Rorschach test—even when careful qualitative analysis is utilized.

TABLE 3

CONSTANTS OF THE DISTRIBUTION OF RORSCHACH MALADJUSTMENT SCORES IN THE THREE EXPERIMENTAL GROUPS, AND DIFFERENCES IN RORSCHACH MALADJUSTMENT AMONG THESE GROUPS

	Normal	Hysteric	Paranoid
Mean	36.9	59.7	85.5
σ	11.0	19.1	32.4
σ_m	2.5	4.3	7.4
	Normals vs Hysterics	Normals vs Paranoids	Hysterics vs Paranoids
Mean Difference	22.8	48.6	25.8
σ_D	2.8	7.7	7.5
C.R.	8.1	6.3	3.4

In general, then, it would appear that the Rorschach maladjustment score is able to detect personality maladjustment with at least moderate efficiency and that one may feasibly use it as a "maladjustment criterion" for interpreting the results of the rigidity battery.

c. The "looseness" or *pathology* score is a separate compilation of all penalty weights given in the *maladjustment scoring* which are judged to indicate looseness or disorganization in the personality structure. It seemed desirable to have a separate index which would point up more serious pathology, such as peculiarities in thinking logic or unusual perseverative interest in sexual topics. This score is used only for a better understanding of the maladjustment score. Details relative to the penalty weights which go into this score may be found in Appendix VI.

An attempt was made to derive a number of other Rorschach scores (e.g., *degree of general hostility* and *reaction to stress*). Because of their limited range of variation and their general lack of promise they were not given further consideration.

2. Guilford's STDCR ^{estimate} _{pg. 2}

This inventory was not used with the intention of actually measuring specific real personality factors such as S, T, D, C, R that the device purports to analyze and then comparing them with rigidity battery results. The main purpose in utilizing the STDCR was to have a uniform means of analyzing a subject's way of describing himself. That is, all of the questions in the STDCR inquire about some behavioral or subjective aspect of the subject; and the way he answers these questions constitutes a form of self description. In answering the various

questions he is implicitly saying such things as: "I feel happy (or sad)." "I have many (or few) friends." "I am calm (or excitable," etc. It is recognized, of course, that in some instances a subject may have so much insight into himself that his self descriptions are actually valid indicators of his real personality. However, the fact of these descriptions being *self descriptions* remains.

With this point in mind, the highness or lowness of the total of the five factor scores is the chief STDCR measures used. A high score means that the subject describes himself in favorable or socially "good" terms. It means that he refers to himself as happy, well adjusted, satisfied, etc. A low score indicates that the subject describes himself in unfavorable "poor adjustment" terms. No assumptions regarding the motivation for these different kinds of self descriptions are made. The STDCR scores will be treated simply as empirical indicators of favorable or unfavorable self description.

It was noted that an additional point to be taken into account when interpreting the STDCR total as a mode of "self description" was the amount of variation in the STDCR scores. That is, a high total accompanied by moderately high variation seemed to have a different significance than a high total accompanied by low variation. For this reason a *variation score* for each series of STDCR scores was worked out. If the five STDCR scores are considered to be ranked in order from highest to lowest ("favorable" self description to "unfavorable" self description), the variation score is equal to the difference of the fifth score from the fourth score *plus* the difference of the third score from the second score *plus* twice the difference of the fifth score from the first score.

This specific way of computing variation is an attempt to maximize those aspects of the variation which seemed most important (in terms of qualitative inspection) for understanding the highness or lowness of the STDCR totals. Further discussion of the variation score will occur at a later point.

That the STDCR total in this study is largely not a measure of real personality factors but is at least to some degree only a subjective kind of self description is implied by the results in Table 4. Thus, as can be seen from Table 4, the paranoid schizophrenics do not differ signifi-

TABLE 4

CONSTANTS OF THE DISTRIBUTION OF STDCR TOTAL SCORES IN THE THREE EXPERIMENTAL GROUPS, AND DIFFERENCES IN STDCR TOTAL SCORES AMONG THESE GROUPS

Constants	Normal	Hysteric	Paranoid
Mean*	32.1	20.9	28.2
σ	5.1	7.2	8.1
σ_m	1.2	1.6	1.8
Constants	Normals vs Hysteries	Normals vs Paranoids	Hysteries vs Paranoids
Mean Difference	11.2	3.9	7.3
σ_D	2.0	2.2	2.4
C.R.	5.6	1.8	3.0

* The higher the mean, the "better" the self description implied.

cantly from the normal subjects. This is true also when the factor scores are considered individually. Furthermore, although the paranoids are clinically and in terms of test criteria *more disturbed* than the conversion hysterics, their STDCR scores would misleadingly imply that their personality traits and reactions are *more appropriate* and adjustive than those of the hysterics. Further evidence in a similar vein will be presented in more precise terms at a later point.

3. Clinical Diagnosis

It should be briefly noted that when this project was first undertaken conversion hysterics and paranoids were included on the widely held assumption that the hysterics would represent at one extreme the non-rigid type of personality and the paranoids at the other extreme a very rigid type of personality. It was thus that a clinical validity criterion for judging the rigidity battery would have been provided. However, the obtained results (verified by another study, 3, pp. 133-135) indicate that conversion hysterics and paranoids lie at the same extreme of rigidity. Consequently, validation comparisons are restricted mainly to contrasts between the normals on one hand and the conversion hysterics and paranoids on the other hand.

B. PRELIMINARY ANALYSIS OF INDIVIDUAL TASKS IN THE RIGIDITY BATTERY

This first phase of analysis is intended to describe very briefly some of the characteristics of the *individual* tasks in the rigidity battery: to make clear in a general fashion how the individual tasks are related to a variety of validity criteria and to point out the limitations of their independent use.

It is quite clear from the data obtained that *no single rigidity measure in the total battery is very useful in terms of predictive efficiency*. Most of the correlations and comparisons with validity criteria given below are definitely low—although there is a certain trend and consistency in relationship that appears throughout the results. Thus, (as shown in Table 5), only two tasks (Vigotsky sorting and spontaneous TAT interpretation) *significantly* differentiate the normals as being less rigid than both the hysterics and paranoids.

TABLE 5
CONSTANTS OF THE DISTRIBUTIONS OF INDIVIDUAL RIGIDITY TASK SCORES IN THE THREE EXPERIMENTAL GROUPS,
AND DIFFERENCES IN INDIVIDUAL RIGIDITY TASK SCORES AMONG THE GROUPS

Rigidity Task	Mean of Normal	Mean of Hysteric	Mean of Paranoid	σ of Normal	σ of Hysteric	σ of Paranoid	N ^a vs. H			N vs. P			H vs. P		
							Diff.	C.R. ^b	Diff. Favors	Diff.	C.R.	Diff. Favors	Diff.	C.R.	Diff. Favors
Vigotsky	16.1	10.3	11.3	4.9	3.9	4.7	5.8	4.1	H	4.8	3.2	N	1.0	.8	P
Colors	11.5	12.2	13.3	2.4	2.8	3.8	.7	.9	H	1.8	1.8	P	1.1	1.1	P
Traits	20.9	10.1	21.4	5.5	5.9	7.8	1.8	1.0	N	.5	.2	P	2.3	1.0	P
Self (ordinary series)	11.1	7.7	5.4	5.1	4.9	4.7	3.4	2.1	N	5.7	3.1	N	2.3	1.5	H
Self (unusual series)	8.3	5.4	4.8	5.8	5.6	5.2	2.9	1.6	N	3.5	1.9	N	.6	.4	H
Independent TAT	28.5	22.3	22.6	5.2	5.2	6.8	6.2	4.2	N	5.9	3.1	N	.3	.2	H
TAT choice	27.9	24.2	22.3	7.5	8.9	10.6	3.7	1.4	N	5.6	1.9	N	1.9	.6	H
Annoyance (S)	13.9	16.4	12.3	6.0	3.9	6.9	2.5	1.5	H	1.6	.8	N	4.1	2.0	H
Annoyance (O)	18.4	19.7	17.4	7.4	4.0	6.6	1.3	.7	H	1.0	.6	N	2.3	2.3	H
Interests (S)	17.4	14.2	16.8	5.9	5.4	6.3	3.2	1.8	N	.6	.3	N	2.6	1.4	P
Interests (O)	20.1	22.3	21.0	6.2	5.1	7.4	2.2	1.2	N	.9	.4	P	1.3	.7	H
P-F	30.9	28.9	26.9	6.7	11.0	9.5	2.0	.7	N	4.0	1.5	N	2.0	.6	H
Blots	48.6	39.5	35.1	16.2	14.4	11.2	9.1	1.9	N	13.5	3.0	N	4.4	1.1	H
Aspiration (S)	+6.3	+5.0	+4.2	4.2	4.2	3.9	1.3	.9	N	2.1	1.6	N	.8	.6	H
Aspiration (F)	+2.2	-1.0	-1.6	4.6	6.0	6.6	3.2	1.9	N	2.8	1.6	N	.4	.2	H

^a N = Normal; H = Hysteric; P = Paranoid.

^b C.R. = Critical Ratio. A critical ratio of 3 has been adopted as the level of significant difference. This high standard of significance has been chosen because it is felt that the rather new and sometimes vaguely defined variables here encountered should be approached with special caution in order to prevent too easy speculation about them.

But at the same time in twenty-three out of thirty instances in which normal means are compared with either hysteric or paranoid means the normals are indicated to be less rigid; and similarly of the thirty critical ratios derived from these comparisons thirteen are 1.8 or higher. Although eleven out of fifteen mean comparisons favor the hysterics as less rigid than the paranoids, these differences are so small and unreliable that no real conclusions on the point can be drawn.

When the correlations of single task rigidity scores with Rorschach *rigidity scores* are computed (see Table 6) results are similar to those obtained from the comparison of the means. That is, very few significant correlations appear, although there is a certain trend of relationship throughout. Thus, no single score correlates well with Rorschach rigidity in every group; and only two tasks (self interests and spontaneous TAT interpretations) correlate .40 or higher for the three groups combined. However, five out of eleven correlations for the *total* group are .30 or higher. Sixteen of the *individual* group correlations are .20 or higher and seven of these

correlations are .40 or higher. Here too, the fact of low relationship is outstanding.

A general comparison of single task scores with *Rorschach maladjustment* scores further emphasizes the limitations of these measures of simple tasks when used independently. As can be seen, no given task (Table 7) correlates significantly with Rorschach maladjustment in all of the diagnostic groups. One is struck by the peculiar range of coefficients. Rigidity on some tasks correlates positively with degree of maladjustment and in other instances rigidity correlates negatively with maladjustment. Indeed, when one observes, for example: (a) that flexibility in color preference has a $-.66$ relation to Rorschach maladjustment in the paranoid group but a $+.16$ relationship in the normal group; (b) or that low rigidity in terms of self interests has a $-.55$ relation to Rorschach maladjustment in the hysteric group, but a $+.25$ relationship in the paranoid group—it may be assumed that the relationship of rigidity to maladjustment is probably a complex one that will not reveal itself in these single isolated measures. Some of the factors underlying the range of

TABLE 6
CORRELATIONS* OF INDIVIDUAL RIGIDITY SCORES AND RORSCHACH RIGIDITY SCORES

Variables	Normals	Hysterics	Paranoids	Total group
	<i>Rho</i>	<i>Rho</i>	<i>Rho</i>	<i>Rho</i>
Colors	-.13	-.18	-.06	-.19
Traits Judgment	-.14	-.25	+.28	+.16
Pictures Like Self	+.06	+.18	-.10	+.17
Self Annoyances	-.20	+.37	-.05	+.12
Other Annoyances	-.19	-.25	-.01	-.09
Self Interests	+.41	+.56	+.05	+.42
Other Interests	+.21	+.09	-.51	-.11
Independent TAT	-.02	+.76	-.08	+.49
P-F (spontaneous)	+.17	+.58	-.20	+.34
Blots	+.16	+.58	+.26	+.34
Aspiration (F)	+.46	+.22	-.02	+.30

* The correlations in this table and in all tables to follow are *Rho* correlations.

TABLE 7
CORRELATIONS OF INDIVIDUAL RIGIDITY TASKS WITH RORSCHACH MALADJUSTMENT

Variables	Normals	Hysterics	Paranoids	Total Group
	<i>Rho</i>	<i>Rho</i>	<i>Rho</i>	<i>Rho</i>
Color	+ .16	-.20	-.66	+ .16
Trait Judgment	+ .51	+ .02	+ .29	+ .13
Pictures Like Self (usual series)	+ .60	+ .13	+ .38	-.10
Annoyances (S)	+ .39	-.54	+ .03	+ .04
Annoyances (O)	+ .52	-.07	+ .12	+ .03
Interests (S)	-.13	-.55	+ .25	-.19
Interests (O)	-.17	-.12	-.12	-.02
Independent TAT	-.21	+ .12	+ .42	-.28
Choice TAT	-.17	-.20	+ .38	-.19
P-F	-.34	-.34	+ .20	+ .30
Blots	-.24	-.08	+ .34	-.23
Aspiration (F)	-.49	+ .02	-.24	-.32

correlations here obtained will become clearer at a later point when more complex analyses of the data are described.

Altogether, then, one may conclude that there is little to be gained by attempting to measure or understand rigidity and its related phenomena purely in terms of each separate task comprising the rigidity battery.

C. ANALYSIS OF TOTAL RIGIDITY SCORE

The *total rigidity score* is equal to the sum of an individual's ranks for sixteen subtest scores. This general measure proves to be a more satisfactory one than any of the single task measures. It has also proved itself more effective than various combinations of individual tasks that were attempted. Its differentiations and correlations relative to validity criteria are at a more significant level. Before preceding to an analysis of these relations with validity criteria it will be well to deal with the question of whether the single task scores show some kind of consistent relationship to the total score and to what degree they overlap in their contribution to the total score.

The single scores show a low to moder-

ate relationship to the total score. Thus, for the *normal* group only six of the twelve correlations are .30 or higher and only three are .40 or higher. Likewise, for the *hysterical* group seven of the twelve correlations are .30 or higher and four .40 or higher. In the *paranoid* group one finds only four correlations that are .30 or higher and only one correlation equals or exceeds .40. There are distinct

TABLE 8^a
CORRELATIONS OF SINGLE RIGIDITY SCORES
WITH TOTAL RIGIDITY^b

Variables	Normal	Hysterical	Paranoid
	<i>Rho</i>	<i>Rho</i>	<i>Rho</i>
Color	+ .27	-.26	-.02
Traits	+ .03	+ .24	+ .34
Self (usual)	+ .37	+ .38	+ .36
Annoy. (S)	+ .21	+ .13	-.31
Interest (S)	+ .32	+ .56	+ .05
Annoy. (O)	+ .19	-.22	-.05
Interest (O)	+ .12	+ .22	+ .04
TAT (ind.)	+ .53	+ .48	+ .25
TAT (Choice)	+ .52	+ .67	+ .28
P-F	+ .46	+ .38	+ .17
Blots	+ .33	+ .52	+ .56
Aspiration (F)	+ .23	+ .30	+ .17

^a Four of the sixteen individual tasks are not included in this analysis because their restricted scatter made correlations rather meaningless.

^b In each case where a total score was correlated with a specific individual score, the individual score had previously been subtracted from that total score.

differences in the degree to which the single tasks seem to measure whatever there is that is common to the total score. Thus, color preferences, self annoyances, annoyances of others, and interests of others tend with but a few exceptions to give very low coefficients. On the other hand, such tasks as independent TAT interpretation, choice TAT interpretation, and blot identification tend to range at a distinctly more significant level. However, it is clear that in general the single tasks do not measure any simple common uni-dimensional factor in any real sense. The significance of this fact will be clarified and expanded at a later point.

To determine how much overlap or duplication there was among the various individual tasks, scatter-diagrams were plotted in all those instances where inspection of the data might lead one to anticipate significant relationships. Correlation coefficients were then determined for those scatters that suggested significant overlap. Although there are numerous instances in which specific tasks give moderately high correlations within the setting of a given diagnostic group and although there are several cases in which moderately high correla-

tions obtain when the three diagnostic groups are combined, there is no instance in which the overlap between two tasks persistently appears in *each* of the diagnostic groups. Such data tend to imply that none of the tasks duplicate each other to such an extent that it would be considered advisable to let one represent another. A more specific indication of the manner in which the tasks do overlap is shown by Table 9.

Most of these correlations are below .50; and only three of them are .60 or higher. (It will become clear at a later point that moderate to high overlap between certain task scores is advantageous in the measurement of rigidity tendencies.)

Returning to the question of what kind of relationships obtain between total rigidity scores and criterion scores, we find that when groups are compared (see Table 10) in terms of their mean total scores the normals are significantly differentiated as being less rigid than either the hysterics or the paranoids. Once again there is no real difference between the hysterics and paranoids. Indeed, it is interesting to note how similar the means of the two groups are. Among the *single* rigidity tasks, it is true that

TABLE 9
MOST SIGNIFICANT CORRELATIONS AMONG THE INDIVIDUAL RIGIDITY TASKS

Variables	Normals		Hysterics		Paranoid	
	<i>Rho</i>	S.E.	<i>Rho</i>	S.E.	<i>Rho</i>	S.E.
Interest S+O	+.56	.16	N.S.*		N.S.	
Annoyances S+O	+.89	.07	N.S.		+.64	.14
Independent TAT+Choice TAT	+.72	.10	N.S.		N.S.	
Traits+Self (Ordinary Series)	+.43	.19	N.S.		N.S.	
Blots+P-F	+.48	.18	N.S.		N.S.	
TAT Choice+Interest (S)	N.S.		+.51	.18	N.S.	
Blots+Interests (S)	N.S.		+.49	.19	N.S.	
Blots+Traits	N.S.		N.S.		+.48	.18
Blots+Aspiration (S)	N.S.		N.S.		+.49	.18

* N.S. = Not significant.

TABLE 10

CONSTANTS OF THE DISTRIBUTIONS OF TOTAL RIGIDITY SCORES IN THE THREE GROUPS,
AND DIFFERENCES IN TOTAL SCORES AMONG THESE GROUPS

Constants	N*	H	P	N+H	N+P	H+P
M	418.0	534.0	517.0			
σ	91.5	110.0	93.2			
σ_m	20.8	25.2	21.1			
D				116.0	99.0	17.0
σ_D				33.0	29.3	33.0
C.R.				3.5	3.4	.5

* N = Normal; H = Hysteric; P = Paranoid.

Vigotsky sorting and spontaneous TAT interpretation differentiate the normals from the hysterics and paranoids at a more significant level than the total score; but the superiority of these tasks disappears when another criterion such as Rorschach rigidity is brought into the picture.

The relation of the total rigidity score to Rorschach rigidity tends to be moder-

TABLE 11

CORRELATIONS OF TOTAL RIGIDITY SCORE
WITH RORSCHACH RIGIDITY

Normal	Hysteric	Paranoid	Total
$+.31$ S.E. (.21)	$+.73$ S.E. (.11)	$+.10$ S.E. (.24)	$+.52$ S.E. (.10)

ately high. It ranges from .10 in the paranoid group to .73 in the hysteric group. For the three groups combined the coefficient is .52. These differences are probably at least in part due to the narrower range of scores in the normal and paranoid groups as contrasted with the hysteric group. But there are more important reasons for these differences which will be discussed at a later point. Altogether, the preceding data imply that total rigidity scores measure "general" differences in rigidity trends with only low to moderate success.

Although only those persons who fell within the IQ range of 95 to 110 were

used as subjects, still IQ differences in the groups exist. One might ask whether the observed *general* rigidity trend differences are not basically due to variations in intelligence.

The correlations shown in tables 12 and 13 indicate that intellectual differ-

TABLE 12

CORRELATIONS OF INTELLIGENCE WITH
TOTAL RIGIDITY SCORE

Normal	Hysteric	Paranoid	Total
$+.02$ S.E. (.24)	$-.29$ S.E. (.22)	$-.52$ S.E. (.18)	$-.51$ S.E. (.10)

ences do contribute in a limited degree to the total rigidity score. However, as can be seen from the correlations of intelligence with Rorschach rigidity, the contribution which intelligence makes to the total score seems in general to be different from that which the Rorschach rigidity scores and the total scores have in common.

And if one assumes that Rorschach rigidity is basically some kind of index

TABLE 13

CORRELATIONS OF INTELLIGENCE WITH
RORSCHACH RIGIDITY

Normal	Hysteric	Paranoid	Total
$+.01$ S.E. (.24)	$-.27$ S.E. (.22)	$-.04$ S.E. (.24)	$-.28$ S.E. (.12)

of personality rigidity, it would appear that the total rigidity score does get at a personality rigidity variable which is not measured by intelligence. The fact that intelligence does in some of the groups have a significant influence on *general rigidity trends* is not surprising when one considers the interdependence of intellectual and emotional factors; and remembers that the intellectual assets of an individual may aid him in solving very personal emotional problems or benefiting from psychiatric therapy. Generally, the total rigidity score refers to rigidity trends that are fairly independent of intelligence; but it is likely that, if one wanted to compare individuals of widely differing intelligence, separate norms for the different intellectual levels would be necessary.

Some effort has been directed to demonstrating that the battery of rigidity tasks measures rather consistently some common variable that may be called "personality rigidity," and the indications are that it does measure such a variable to a certain degree. However, as one reviews the data and notes such facts as unusual shifts in correlation from group to group; inconsistent relationships; and the wide scatter of *single task scores* within many subjects' total scores, two possibilities come to mind:

a. One may hypothesize that the present technique for measuring *personality rigidity* has only a moderate efficiency and that there are many situations in which it is very ineffective as a measuring device.

b. Or, one may postulate that to conceive *personality rigidity* as a measurable generalized characteristic of personality structure is fictional over-simplification. That is, one may assume that there are

general *tendencies* toward rigidity or looseness in most personality structures; but that these are only tendencies and that possibly there are different levels of rigidity and perhaps even contradictory currents of rigidity in the same individual. Certainly the first hypothesis accounts for some of the discrepancies in results, but it will be shown in the next section that the second hypothesis seems most applicable.

D. ANALYSIS IN TERMS OF LEVELS OF RIGIDITY

If one prepares profiles of the various task scores for each individual, one is struck by the fact of *variation* rather than of uniformity. It is the rule to find that most subjects show a wide range of differences in their separate scores. The individual who is uniformly high or low is an exception. This is not at all strange when one considers the range of difficulty and emotional stress represented among the tasks in the rigidity battery. Some tasks (e.g., color preference or trait judgment) simply call for an expression of opinion and permit the subject to reach a decision essentially in terms of his own frames of reference without real concern as to the rightness or wrongness of his decision. Others (e.g., independent TAT interpretation and aspiration estimation during failure) place the subject in a position where he has to decide about things that have some degree of emotional importance to him and where he feels that his decisions are more or less subject to external criticism. Is it not assuming an unusually simple formulation of personality to expect that rigidity shown for the first type of task will have any positive relation to rigidity shown in the second type of task? With this question in mind it was decided to work out

a rough arbitrary classification of the rigidity tasks into a series of levels and to determine what kinds of relations obtained among these levels over the range of subjects. Finally, the task was seen as one of establishing the significance of these relationships of levels by using the validation criteria available.

The rigidity tasks may be roughly classified into three levels—as defined by the criteria that follows:

Level I

The task represents a demand on the subject which he finds difficult to deal with because it arouses emotion or calls for a type of response which is not readily available to him in terms of his background of experience

Level II

The task involves a moderate degree of difficulty, but is at the same time subject to considerable "private frame of reference" determination.

Level III

The task represents a demand to which the subject can respond *without much difficulty* or in very arbitrary unchallengeable terms dictated by his own private frames of reference. In other words, he may respond to such tasks about "as he pleases."

In terms of these criteria the specific tasks may be considered to group themselves in the following categories:

Level I

1. Aspiration estimates during failure.
2. Independent TAT interpretation.
3. Choice TAT interpretation.
4. Blot identification.

Level II

1. Self interests.
2. Interests of others.
3. Self annoyances.
4. Annoyances of others.
5. Aspiration estimates during success.
6. Vigotsky sortings.
7. Responses to the P-F situations.

Level III

1. Color preferences.
2. Selection from ordinary range of pictures of persons like the self.
3. Selection from unusual range of pictures of persons like self.
4. Judgment of traits from pictures.

The grouping of tasks into levels is assumed to hold true only "on the average." Thus, it is possible that for some subjects a level II task is actually a Level I task. However, the presence of several tasks at each level minimizes error of this kind.

When the single rigidity scores of each subject were viewed in terms of the above scheme, it was evident that there were definite patterns of relationship among them which could be precisely

defined. Furthermore, almost immediately after such patterns were first observed it was noted that certain of them were associated with individuals who might be described as well adjusted (in terms of Rorschach and clinical criteria) and those personality structures appeared to be integrated in a balanced fashion; whereas other patterns were associated with persons who were ill and

disturbed. The pattern associated with the adjusted integrated person may be pictured somewhat in the fashion shown

at the top of the next page.

The integrated personality is marked by lowest degree of rigidity at level I, with moderately increasing rigidity at levels II and III. It is also characterized by a definite tendency for single tasks at the *same level* to indicate a similar degree of rigidity. However, the pattern of the disturbed individual frequently departs radically from the "healthy" pattern. Greatest rigidity may be shown at level

CHARACTERISTICS OF THE RIGIDITY LEVELS IN "IDEAL PROFILE"

Level I	Level II	Level III
(A) Of the three levels this is the least rigid.	(A) Occupies middle point of rigidity.	(A) Highest rigidity.
(B) All rigidity scores at this level cluster at a similar point of rigidity.	(B) All rigidity scores at this level cluster at a similar point.	(B) All rigidity scores cluster at similar point.

I instead of level III; or tasks at the same level may give widely different rigidity scores. In order to test out the above suppositions in precise fashion it was first necessary to construct an "ideal healthy profile," in which the relationships of representative tasks from each level were quantitatively defined. Furthermore, it was necessary to work out a system of weighted penalties to score the deviations of each subjects profile from this "ideal profile." There follows a summary of the scoring scheme that was evolved.

As can be seen in the above summary, scoring weights are assigned so as to penalize all deviations from the "ideal profile" and to give positive credit for conformance to it. In sections A and B of the scoring summary credits are given in terms of the assumption that rigidity for level I tasks should be *less than* rigidity for level II and III tasks. Each level is represented by sample tasks rather than by all the tasks falling at that level. *Rank* differences between the level I and level II and III tasks in the optimum direction determine the positive weighting and rank differences contrary to the optimum direction determine the negative weighting. In section C an evaluation is made of the degree to which level II rigidity is less than level III rigidity, by comparing sample tasks from each of these levels. Finally, in section D a test is made of the extent to which sample tasks from the same rigidity level actually give similar rigidity scores. A

fixed positive weight is assigned for each instance in which the subject responds with equivalent rigidity to tasks belonging to the same level. A range of negative weights is used to penalize significant *differences* in rigidity among tasks of the same level.

The final total score is the difference between the sum of the positive weights and the sum of the negative weights.

The scores secured through the above procedure manifest some very interesting relationships to maladjustment, as defined by the Rorschach test. Within the normal group a very clear correlation obtains. The fact of clear correlation is also evident when the three separate groups are treated as one. However, both the hysteric group and the paranoid group give *insignificant* coefficients for the two variables. When these two groups were analysed to determine why they differed so markedly from the normals it was discovered that in both instances the correlations were thrown off by several cases that had certain important characteristics in common. It was found that these particularly deviant cases were all marked by the following:

1. They were all among the most extremely sick and disorganized of their respective groups—as defined by Rorschach maladjustment scores, Rorschach looseness scores, and clinical symptoms.
2. They were all deviants from the correlation trends of their respective groups in the sense that their "balance" rigidity scores implied unusually little disturbance—whereas their Rorschach scores implied that they were very ill. On the basis of the above, a hypothesis was

TABLE 13A
SUMMARY OF METHOD FOR SCORING RIGIDITY PATTERN DISTURBANCE

Optimum Relationship	Ranks	Positive Credit	Ranks	Negative Credit
A. 1. Rigidity of aspiration (F) <i>less than</i> rigidity of color preference	If: 1-2 ranks less	+1	If: 1-2 ranks more	-1
2. Rigidity of aspiration (F) <i>less than</i> rigidity of annoyances (S)	3 ranks less	+2	3-4 ranks more	-2
3. Rigidity of aspiration (F) <i>less than</i> rigidity of trait judgment	4-5 ranks less	+3	5 or more ranks	-3
4. Rigidity of independent TAT <i>less than</i> rigidity of color preference	6 or more ranks	+4		
5. Rigidity of independent TAT <i>less than</i> rigidity of annoyances (S)				
6. Rigidity of independent TAT <i>less than</i> rigidity of trait judgment				
B. 1. Rigidity of aspiration (F) <i>less than</i> rigidity of aspiration (S)	If: 1 rank less	+1	If: 1-2 ranks more	-1
	2 ranks less	+2	3-4 ranks more	-2
	3 ranks less	+3	5-7 ranks more	-3
	4 ranks less	+4	8 or more ranks	-4
	More than 4 ranks	+5		
C. 1. Rigidity in selecting pictures like self (unusual series) <i>more than</i> rigidity relative to self interests <i>and</i> rigidity in responding to P-F situations	Same weights as used in (A) above		Same weights as in (B) above	
D. Following pairs of tasks should be at same rigidity level ^a	—	+4	—	For each rank difference beyond two, negative weights are assigned as in (B) above
1. Aspiration (F) and independent TAT interpretation				
2. Aspiration (F) and choice TAT interpretation				
3. Aspiration (F) and blot identification				
4. Independent TAT and choice TAT interpretation				
5. Choice TAT interpretation and blot identification				
6. Self interests and interests of others				
7. Acceptance of "ordinary" pictures like the self and "unusual" pictures like the self ^b				

^a That is, within two ranks of each other.

^b Final score is equal to sum of positive and negative credits.

TABLE 14
CORRELATIONS OF "BALANCE RIGIDITY SCORES"
AND RORSCHACH MALADJUSTMENT SCORES

Normal	Hysteric	Paranoid	Total Group
+ .84 S.E. (.07)	+ .06 S.E. (.24)	+ .19 S.E. (.23)	+ .42 S.E. (.11)

formulated that the balance rigidity score was not a measure of maladjustment, as such; but rather a measure of *present degree of disturbance* in an individual's rigidity defenses—that is, a measure of how "comfortable" or "disturbed" he was with the particular style of defense or adjustment he was now utilizing. This would perhaps explain the deviant cases—since there is some logic in assuming that individuals who manifest very primitive symptoms or extreme disorganization have ceased to struggle with their difficulties and are no longer subject to the tensions associated with struggle.

To test this viewpoint, it was decided to continue the use of the Rorschach maladjustment score as a measure of present disturbance in adjustment. However, it was first necessary to isolate and eliminate objectively all cases from the hysteric and paranoid groups that might be considered to have "settled" in rather regressive fashion for a specified neurotic or psychotic adjustment, and whose Rorschach maladjustment scores would consequently not represent an adequate index of disturbance in defenses. This was done by eliminating any case in which the rigidity balance score implied that the individual was among the twenty per cent of *least disturbed* individuals in his group, but whose Rorschach maladjustment score or Rorschach looseness score (whichever was applicable) indicated that he was among the twenty per cent of most maladjusted or disorganized in his group. By this procedure three hysterics and two paramoids were eliminated.

It is interesting to note that the three hysterics selected have identical symptoms, viz.,

they are all subject to generalized tremors or convulsive-like seizures involving the entire body. But it is most surprising of all to find that they are the only hysterics to manifest such behavior as their dominant symptomatology. These symptoms are obviously of a more regressive and primitive character than the headaches, pains, and slight paralyses characteristic of the other hysterics in the group. The two paranoids eliminated were clinically both marked by extreme looseness. Their Rorschach protocols are pervaded by an extreme amount of anal and sexual content (e.g., "bloody vagina," "penis," "hemorrhoid protrusions") which was expressed quickly and without hesitation. One of the paranoids spontaneously remarked that she was "hearing voices" and both were passively compliant during examination—all of which is in definite contrast to the reserved hostile behavior shown by most of the other subjects in the paranoid group. In general, one seems justified in concluding that the cases eliminated in terms of the contrasting extremeness of their "balance" and Rorschach scores show certain clinical uniformities that confirm earlier stated assumptions about the level of their adjustment.

When correlations between rigidity balance scores and Rorschach maladjustment scores are determined on these "clean" groups, the correlation for the hysteric group shifts from +.06 to +.46 and the correlation of the paranoid group shifts from +.19 to +.72. The correlation for the total group shifts from +.42 to +.60. That is, if the rigidity balance score¹ is conceived as a measure of present disturbance in defenses it correlates with suitably interpreted Rorschach maladjustment scores quite highly.

The diagnostic possibilities of the rigidity balance score and its usefulness in understanding the dynamics of individual cases will be discussed at a later point.

Altogether, the data presented in this section may be said to carry the following implications:

¹ It may be mentioned here that in no instance do rigidity balance scores show any relationship to intelligence scores.

TABLE 15
SUMMARY OF CORRELATIONS BETWEEN RIGIDITY
BALANCE SCORES AND REINTERPRETED
RORSCHACH MALADJUSTMENT SCORES

Normal	Hysteric	Paranoid	Total Group
+ .84 S.E. (.07)	+ .46 S.E. (.21)	+ .72 S.E. (.13)	+ .60 S.E. (.09)

1. They imply that the concept of a general trait or general factor of personality rigidity is a fictional one. Although there appear to be certain *general* personality rigidity *trends*, to conceive of them in any simple uni-dimensional sense or even in a moderately complex *trait sense* is an oversimplification of the facts.

2. They point to the probability that personality rigidity varies at different levels of the personality structure.

3. They imply that "good" or healthy adjustment is usually marked by certain optimum relationships among the rigidity levels in the personality structure.

4. They imply that factors which lead to a disturbance in present adjustment, which require a difficult shift in rigidity defenses, result in a breakdown of optimum relations among the various rigidity levels.

5. Lastly, they indicate that in extreme cases where conflict and disturbance in defenses give way to a markedly regressive, settled neurotic adjustment or regressive-like psychotic adjustment, the various rigidity levels tend to resume the optimum relations characteristic of "non-disturbed" adjustment.

E. ANALYSIS OF INDIVIDUAL RIGIDITY PATTERNS

In this section an attempt will be made to analyse the various kinds of rigidity patterns that appear in each of

the groups and to relate such patterns to degree of maladjustment, clinical symptomatology, and the kind of description of himself the subject gives on the STDCR.

One of the chief problems in analysing the rigidity patterns of a range of subjects is that the large number of rigidity scores which must be considered simultaneously in each case are difficult to conceive as a unity. The underlying pattern is concealed by the fact of complexity. In order to deal with this confusing complexity a number profile system has been worked out which gives a simplified picture of rigidity patterns. This system will now be briefly described. Four variables are considered in the course of picturing a particular rigidity pattern:

1. The degree of present *disturbance* in the pattern—i.e., its deviation from the "ideal" profile previously described in terms of the rigidity balance score.

2. *Generalized trends* toward rigidity—as indicated by the total rigidity score.

3. Degree of rigidity at level I as indicated by a representative score from level I—viz., the independent TAT interpretation score.

4. Indications of unusually low rigidity when dealing with "easy" or "peripheral" rigidity tasks—as measured by the number of certain level II and III tasks for which unusually low rigidity scores are obtained (see section D above).

These rigidity variables may be converted into numbers (as will be described below) and the rigidity pattern represented by a numerical profile in which a particular position is assigned to each variable. Thus: (see top of next page). In this way, by acquainting oneself with the significance of each position in the profile, one may grasp the general picture of an individual's rigidity pattern.

The basis for assigning numerical values to the various positions in the numerical profile is indicated by the

Position One (degree of disturbance)	Position Two (general rigidity trends)	Position Three (level I rigidity)	Position Four (indicator of unusually low peripheral rigidity)
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criteria set forth in Table 15A.

In general, then, if one reads from left to right in any rigidity numerical profile one may note degree of pattern disturbance, general rigidity trends, degree of rigidity under emotional stress, and indications of degree of unusual peripheral flexibility.

Table 16 shows the total range of rigidity patterns that one might theoretically obtain in terms of the four rigidity variables in the profile. It can be seen that the actually obtained patterns tend to scatter over the whole theoretical range. However, one finds instances (e.g., 1120 through 1131) where there are sudden gaps in the distribution. One can only speculate about the meaning of such gaps. It is possible that certain rigidity pattern characteristics are psychologically mutually exclusive.

The patterns for any particular diagnostic group cluster moderately, but there is much overlap among the groups. As will be demonstrated in the analysis

to follow, a rigidity profile does not have an absolute significance. Rather, it must be interpreted *relative to other variables*, such as clinical status, symptomatology, and degree of maladjustment. When rigidity profiles are interpreted in a *relative* sense, their distributions *within* the diagnostic groups reveal themselves to be psychologically meaningful and separable into sub-groupings that overlap only very moderately. An analysis of the rigidity pattern distributions in the various diagnostic groups follows.

1. Patterns in the Normal Group

a. Rorschach test. If each subject's rigidity pattern is placed on a continuum relative to the *rank position* of the subject's Rorschach maladjustment score (as shown in Table 17), some very interesting cluster effects appear. That is, one perceives that the rigidity profiles within certain ranges on the Rorschach maladjustment continuum show similarities to each other and are different from the profiles found at other points on the continuum. By inspection one is able to isolate four rather distinct groupings or clusters of profiles. The first of these groups consists of the four subjects with among the

TABLE 15A
POSSIBLE VALUES FOR THE POSITIONS IN THE RIGIDITY PATTERN PROFILE

Position One (Pattern Disturbance)			Position Two (Generalized Rigidity Trends)			Position Three (Level I Rigidity)			Position Four (Unusual Peripheral Flexibility)		
Degree of Disturbance	Ranks	Value	Degree of Rigidity	Rank	Value	Degree of Rigidity	Ranks	Value	Low Rigidity Peripheral Tasks	Ranks	Value
High	1-22	3	Very high	1-10	4	TAT high	1-20	3	Color	1-10	N ^a
Moderate	23-40	2	High	11-20	3	Moderate	21-40	2	Annoyances (S)	1-15	
Low	41-60	1	Moderate	21-45	2	Low	41-60	1	Annoyances (O)	1-10	
			Low	46-60	1				Trait Judgment	1-15	
									Aspiration ^b (S)		
									Self ^c		
									(Unusual Series)		
									Self ^c		
									(Ordinary Series)		

^a "N" indicates the number of instances in which the subject displayed unusually high peripheral flexibility.

^b The scoring here is more complicated. If the aspiration F rank is below twenty and the aspiration S rank is nine or more ranks higher, this represents an instance of unusual peripheral flexibility.

^c Here the scoring of easy peripheral flexibility is based on a comparison of the flexibility shown for a task easily controlled by the subject as contrasted with a task not easily controlled. If the self rank is more than five ranks higher than the independent TAT interpretation rank, it is considered that an unnecessary peripheral flexibility has been mobilized.

TABLE 16

TOTAL POSSIBLE RANGE OF RIGIDITY PROFILE PATTERNS, AND THOSE ACTUALLY APPEARING IN THE THREE EXPERIMENTAL GROUPS

Profile	N*	H	P	Profile	N	H	P	Profile	N	H	P
1 1 1 0	3	1	2	2 1 1 0				3 1 1 0			
1 1 1 1 ^b	3	1		2 1 1 1	2			3 1 1 1	2		
1 1 2 0				2 1 2 0				3 1 2 0			
1 1 2 1				2 1 2 1				3 1 2 1		1	
1 1 3 0				2 1 3 0				3 1 3 0			
1 1 3 1				2 1 3 1				3 1 3 1			
1 2 1 0	1			2 2 1 0				3 2 1 0			
1 2 1 1	1			2 2 1 1				3 2 1 1		2	
1 2 2 0	2			2 2 2 0		1	1	3 2 2 0			
1 2 2 1				2 2 2 1	2			3 2 2 1	2		3
1 2 3 0		1		2 2 3 0				3 2 3 0			
1 2 3 1			1	2 2 3 1				3 2 3 1			4
1 3 1 0				2 3 1 0				3 3 1 0		2	2
1 3 1 1				2 3 1 1	1			3 3 1 1			1
1 3 2 0				2 3 2 0				3 3 2 0			
1 3 2 1		1		2 3 2 1				3 3 2 1			1
1 3 3 0				2 3 3 0		1		3 3 3 0			
1 3 3 1				2 3 3 1		1	2	3 3 3 1		2	
1 4 1 0				2 4 1 0				3 4 1 0			
1 4 1 1				2 4 1 1				3 4 1 1			
1 4 2 0	1			2 4 2 0		1		3 4 2 0			
1 4 2 1				2 4 2 1		1	1	3 4 2 1			
1 4 3 0		1		2 4 2 0		1		3 4 3 0			
1 4 3 1				2 4 3 1		1	2	3 4 3 1		1	

* N=number of normal subjects manifesting the indicated pattern; H=number of hysterics; P=number of paranoids.

^b The number "1" here indicates that there may be one or more scores that imply unusually low peripheral rigidity; that is to say, in this table distinction is made only between the *presence* (indicated by "1") or *absence* (indicated by "0") of unusual peripheral flexibility.

TABLE 17

RIGIDITY PATTERNS OF NORMAL SUBJECTS RANKED ACCORDING TO RORSCHACH MALADJUSTMENT SCORES AND SEPARATED INTO "CLUSTER" GROUPS

Group I	Group II	Group III	Group IV
Subject 7 1 1 1 0	Subject 12 1 2 2 0	Subject 4 2 1 1 2	Subject 13 3 1 1 2
Subject 19 1 2 1 1	Subject 20 1 2 2 0	Subject 10 2 3 1 1	Subject 17 3 1 1 2
Subject 14 1 1 1 0	Subject 1 1 4 2 0	Subject 11 1 1 1 1	Subject 3 3 2 2 5
Subject 8 1 1 1 0	Subject 2 (not classified) 1 2 1 0	Subject 15 2 1 1 2	Subject 5 3 2 2 3
		Subject 16 1 1 1 3	
		Subject 6 2 2 2 3	
		Subject 18 2 2 2 1	
		Subject 9 1 1 1 2	

lowest Rorschach maladjustment scores. With but one minor variation their common rigidity pattern takes this form: 1 1 1 0. In terms of what has previously been said about the general significance of each of the profile positions, one may conclude that this 1 1 1 0 profile is marked by low *emotional* rigidity; an absence of any generalized rigidity trends; and freedom from disturbance in the interrelations of the rigidity levels. Furthermore, one is not able to detect any erratic manifestations of unusually low *peripheral rigidity*. The whole pattern conveys a picture of optimum distribution of rigidity defenses within the personality structure. Stated in more positive terms, the individuals in this group seem to show the following rigidity characteristics:

1. They apparently seem not to feel threatened by most situations—as is indicated by the fact that they have no need for maintaining any sort of persistent anticipatory guarding or rigidity set.

2. They seem to maintain their composure under emotional stress very well. In unusually demanding situations they mobilize quickly; for instead of retreating behind rigidity defenses, they mobilize increased flexibility for the emergency.

3. Although they are capable of freeing themselves from rigidity tendencies to a high degree when the occasion requires, they tend to maintain a certain basic minimum peripheral rigidity that is free of variations in the direction of extreme flexibility.

The second pattern group² consists of three individuals who are, in general, moderately higher in Rorschach maladjustment than the individuals of *group one*. Their basic pattern takes this general form: 1 2 2 0. It is obviously a more guarded and rigid group than *group one*. Level I rigidity is moderately high and *general* rigidity trends vary from moderate to extreme. However, there is a complete absence of disturbance in rigidity level relations and no signs of unusually low variations in peripheral rigidity. This group is especially interesting because it consists of individuals who are making a healthy adjustment, but in terms of much more rigid defenses than *group one*. The subjects in this group tend to approach situations with greater anticipatory rigidity and to react to stress demands in a more guarded fashion. However, they *consistently* maintain an optimum balance between peripheral and emotional level rigidity and are capable of increasing their

customary level of flexibility when more important emotional situations are in question. This balance and ability to increase flexibility under stress are apparently the most important factors in the group's healthy adjustment; for as will be shown, many more maladjusted individuals display greater freedom from rigidity—but not the same degree of balance in the relations among the rigidity levels of the personality structure.

The eight subjects in *group three* show considerable variation in their pattern profiles. One finds a range from 1 1 1 1 to 2 3 1 1. However, they are in general distinguished from those in the groups preceding them by their consistent manifestation of unusually low peripheral rigidity in position IV and frequently also by signs of moderate rigidity balance disturbance in position I. Persons in this group seem to have some difficulty with their present defenses. Although they show little generalized anticipatory guarding and little need to retreat to a more rigid position when faced with stress demands, they do not manifest the same co-ordinated unity in rigidity organization that is characteristic of the healthier normals in the other groups. They assign a greater importance to peripheral demands and irregularly they meet such demands with inappropriate mobilizations of flexibility which in healthier subjects are usually reserved for facing more important (emotional) situations.

Since the phenomenon of unusually high flexibility mobilization in reaction to peripheral demands is rather prominent in this group it would be well to consider briefly its meaning at this point. The phenomenon refers specifically to such behavior as claiming an unusually high number of self interests; denying that more than a very few things are annoying; acceptance of an extreme number of pictured persons (especially in the unpleasant series) as being like the self; showing an *overwillingness* to raise aspirations during success; etc. These peripheral mobilizations may be thought of as serving two functions:

1. On the one hand, some of them (e.g., over-responsive raising of aspirations during success) seem to represent an attempt to secure easy satisfaction and success. They represent, as it were, an attempt to take a peripheral activity out of its peripheral context and its conversion into a central source of satisfaction.

2. On the other hand, certain of the peripheral mobilizations (e.g., acceptance of an unusual number or unpleasantly pictured persons as being like the self) seem to represent an over-responsiveness to tasks which are interpreted as being much more threatening than most other subjects see them. That is, what

²Subject 2 is omitted from any of the pattern classifications because her pattern shows few similarities to any of the patterns in its vicinity on the maladjustment continuum.

remains a fairly peripheral type of threat for most subjects become an important threat for others and these latter deny their vulnerability by showing an extreme overwillingness, for example, to admit the possibility that all sorts of unpleasant (even psychotic-looking) individuals are like themselves. In general, peripheral mobilizations of this sort may be thought of as representing an over-sensitivity to peripheral threat.

The peripheral mobilizations in *group three* included both types; but the use of peripheral activities for *easy satisfaction* predominates.

The *fourth group* is one that contains the four most maladjusted normal subjects, according to the Rooschach test. The profiles in the group all have the same value in position I, values above 0 in position IV, and approximately similar values in positions II and III. Most clearly, they have in common the fact of their extremely high disturbance in rigidity balance relations and their frequent unusual peripheral flexibility mobilizations. Actually, they are only more extreme examples of group three. They have even greater difficulty in coordinating their defenses and a more pronounced concern with peripheral demands. It is important to note that the two *most maladjusted* subjects in this group show, in addition, a tendency toward moderate *generalized rigidity trends*. These two individuals are guarded and unable to increase their flexibility to meet efficiently situations with important emotional significance.

b. STDCR. An attempt was made to relate STDCR scores to the above described groupings—with the following results:

Group one.—All of the individuals in this group give STDCR scores which attain or moderately exceed in "goodness" general population means. Three of the four subjects attain or exceed the middle rank position for the normal *experimental* group. Furthermore, the same three subjects give STDCR *variation scores* that are in the upper twenty per cent of the normal group. That is, the well integrated healthy individuals of *group one* describe themselves in favorable or "good" terms. However, it is not an extremely "good" self description that they give and it is not a description of extreme uniformity. Their evaluations of factors STDCR vary in terms of the particular factor concerned.

Group two.—All of the individuals in group two give STDCR scores that cluster either at the mean or slightly below the mean of general population norms. However, all of their STDCR *sums* are below the middle rank position of the normal *experimental* group; and with but one exception their STDCR *variation scores* are distinctly above the middle rank position of

the normal *experimental* group.

Clearly, these subjects tend to give a relatively more unfavorable description of themselves—although they show the same ability as the subjects in group one to vary their evaluations from factor to factor. The fact that this group attempts to give only a relatively restrained picture of itself ties in well with the fact that its rigidity pattern is definitely a guarded restrained one. Apparently, the general style of defense reflected in the rigidity pattern reflects itself also in the kind of description of himself the subject presents.

Group Three.—The STDCR sums here scatter widely and follow no apparent uniformity. Five of the eight STDCR *variation scores* fall below the middle rank position and suggest that the individuals in this group tend to be less discriminating than those in groups one and two relative to the single STDCR factors. That is, they seem to describe themselves in more generalized "halo" terms.

Group Four.—The STDCR scores of this group are quite uniformly above the general population means. Three of the four subjects have STDCR *sums* which are distinctly above the middle rank position of the normal *experimental* group. Furthermore these same three subjects' STDCR *variation scores* are in the lowest twenty per cent of the normal group. Generally, it would appear that *group four* individuals give a very one-sided "good" descriptions of themselves. They do not discriminate well relative to the single STDCR factors. It may be postulated that such biased "favorable" self descriptions perhaps represent an attempt to conceal or deny the disturbance which is so apparent in both the rigidity pattern and in the Rorschach material.

Although one can speak only in terms of trends, there are indications from the above that when STDCR scores are interpreted relative to rigidity patterns they take on a functional meaning. That is, one can understand the kind of description of himself the subject gives as a reflection of specific relationships and signs of disturbance indicated in his rigidity pattern.

2. Patterns in the Hysteric Group

The hysteric group may also be analyzed into typical patterns. Although pattern clusters in the normal group were verified entirely by similarities in Rorschach maladjustment scores, an *additional* variable (viz., clinical symptoms) will be used to aid such verification in the hysteric group. Each identified pattern will be described in turn.³

³ Subject 32 is not included in any of the groups to be described below because there are data which tend to contradict a diagnosis of

TABLE 18
INDIVIDUAL *STDCR* SCORES, RANKS OF *STDCR* TOTAL SCORES, AND RANKS OF *STDCR*
VARIATION SCORES FOR THE NORMAL SUBJECTS IN EACH RIGIDITY GROUP

Subjects	S*	T	D	C	R	Rank of Sum of <i>STDCR</i> Scores ^b	Rank of Variation Scores ^c
Rigidity Pattern Group One							
Subject 7	6	10	9	5	8	5.0	1.5
S 19	7	7	6	4	8	10.5	5.5
S 14	5	7	7	6	5	14.0	15.5
S 8	5	10	6	5	7	8.0	5.5
Rigidity Group Two							
S 12	8	3	6	4	8	16.0	1.5
S 20	6	2	5	4	5	19.0	5.5
S 1	5	3	5	4	6	18.0	9.5
Rigidity Group Three							
S 4	6	9	7	5	5	10.5	8.0
S 10	7	5	8	6	6	10.5	11.5
S 11	6	2	3	2	7	20.0	5.5
S 15	6	6	7	5	6	14.0	15.5
S 16	7	9	9	7	8	2.5	15.5
S 6	8	7	9	7	6	6.0	11.5
S 18	6	5	7	6	6	14.0	15.5
S 9	8	7	9	6	9	4.0	9.5
Rigidity Group Four							
S 13	8	10	9	8	8	1.0	19.5
S 17	9	7	9	8	7	2.5	15.5
S 3	6	6	8	6	8	7.0	19.5
S 5	6	4	9	9	4	10.5	3.0

* Each factor is represented by a C-score based on adults.

^b Highest rank for highest sum.

^c Highest rank for greatest variation.

Group one.—This group consists of five subjects who are among those hysterics showing least maladjustment on the Rorschach test. Clinically they all have similar symptoms. Thus, the chief complaint of each subject revolves about localized pain or disturbance in some part of the body, (e.g., heart palpitation, pain in stomach, pain in back, pain in legs). In this group both positions II and III (with one exception) are

conversion-hysteria. First of all, her clinical symptoms consist chiefly of rather vague complaints of insomnia and some slight difficulty in moving one hand. Secondly, her Rorschach maladjustment score is "better" than the mean normal score. Finally, her rigidity pattern is that of a group one normal. Subjects 23 and 25 are also not included in any of the groupings. They simply do not fall into any of the patterns that can be identified. This may possibly be attributed to the limited sampling of conversion hysterics represented in the group.

3 or higher. Aside from case 33, position IV is consistently O. Also the values in position I do not exceed 2. The members of the group tend to be rigid at all levels. Their personality structures are protected by an elaborate series of high rigidity barriers. They show little capacity for mobilizing flexibility to meet stress situations having emotional significance. In general, they are constricted persons who seem to depend upon guarded rigidity to evade dealing with problems. However, in none of these cases does the degree of disturbance in pattern consistency (as shown by the balance score) exceed a moderate level. This implies that although the pattern is a tight rigid one, it is still rather stable and does permit the subject to function moderately well. Furthermore, it may be noted that mobilizations of unusual peripheral flexibility which are associated with special disturbance in rigidity defenses are also absent in this group.

Group two.—Group two consists of seven sub-

TABLE 19
RIGIDITY PATTERNS OF CONVERSION HYSTERICS RANKED ACCORDING TO RORSCHACH
MALADJUSTMENT SCORES AND SEPARATED INTO "CLUSTER" GROUPS

Group I	Group II	Group III
Subject 32 (not classified) 1 1 1 0	Subject 40 3 2 3 1	Subject 31 3 2 1 2
Subject 26 2 3 3 0	Subject 22 3 4 3 3	Subject 37 1 1 1 2
Subject 30 1 4 3 0	Subject 38 2 4 3 1	Subject 23 (not classified) 2 4 2 0
Subject 33 2 3 3 1	Subject 28 2 4 2 1	Subject 21 3 1 2 2
Subject 29 2 4 3 0	Subject 35 3 2 3 2	Subject 34 2 2 2 0
Subject 39 1 2 3 0	Subject 27 3 3 3 2	Subject 24 1 3 2 2
Subject 25 (not classified) 3 2 1 2	Subject 36 3 3 3 2	

jects whose Rorschach maladjustment scores cluster from rank five to rank eleven (rank one indicating the most maladjusted). In contrast with group one, it embraces those who manifest more serious and generalized symptoms (e.g., generalized body pains, persisting vomiting, and dizzy spells). It includes what might be called the larger "middle group" of hysterical subjects. The patterns typical of the group are marked by values of 2 or higher in position I, a value of 3 (with one exception) in position III, and a value of 1 or higher in position IV. These patterns are all similar in that they picture individuals who manifest strong rigidity trends, but whose rigidity defenses are in a state of high disturbance. The group two hysterics show about as much and sometimes less rigidity than the healthier hysterics; but they lack the same coordinated unity. Their rigidity is less consistent (in terms of balance). On the one hand, they are even less capable of mobilizing increased flexibility to face important demands; and on the other hand they are extremely more prone to bursts of non-functional peripheral flexibility. This is another indication of how much more important the organization factor is than mere highness or lowness of general rigidity trends.

Group three.—Group three includes five subjects:

1. Four hysterics with extreme maladjustment scores who show very severe clinical symptoms. Three of these subjects' symptoms center about

tremors or convulsions involving the entire body. One subject has had periods of mutism; feels extremely nervous; and manifests *tremor* and numbness in one arm.

2. Group three includes also one subject whose Rorschach score places her *below* the mean of the hysteric group in maladjustment. However, despite her moderately good showing on the Rorschach test, she has manifested such symptoms as mutism, paralysis of lower limbs, brief convulsive spells, and periods of amnesia. The value of the rigidity pattern is particularly emphasized in this instance; for it classifies this subject with the other hysterics showing most serious symptoms—even though the Rorschach fails to do so. The rigidity patterns typical of the group are most characterized by position III values which do not fall below 2 and by position II values (with two exceptions) which also do not fall below 2. Clearly, these hysterics are much less rigid than those that have already been described. They are less protectively guarded, less constricted by general rigidity barriers; and do not show the same tendency to retreat to rigidity when exposed to emotional stress demands. However, all of their rigidity patterns give evidence of considerable internal disturbance in terms of balance scores or inappropriate peripheral flexibility. The fact that this group manifests the poorest maladjustment scores and the most extreme symptoms, taken in conjunction with the fact that it is the least

TABLE 20
INDIVIDUAL *STDCR* SCORES, RANKS OF *STDCR* TOTAL SCORES, AND RANKS OF *STDCR* VARIATION SCORES FOR THE CONVERSION HYSTERIC SUBJECTS IN EACH RIGIDITY GROUP

Subjects	S	T	D	C	R ^a	Rank of Sum of <i>STDCR</i> Scores ^b	Rank of Variation Scores ^c
Rigidity Pattern Group One							
Subject 26	1	2	0	0	4	20.0	10.0
S 30	4	8	6	5	7	3.5	8.0
S 33	3	5	5	5	4	8.5	14.5
S 29	5	5	4	3	5	8.5	14.5
S 39	3	7	2	3	1	15.5	2.5
Rigidity Group Two							
Subject 40	5	10	7	6	6	1.0	6.0
S 22	4	7	5	5	5	6.0	12.0
S 38	3	4	2	2	5	15.5	12.0
S 28	4	6	5	5	1	10.0	2.5
S 35	4	6	4	3	2	12.5	8.0
S 27	6	6	4	3	8	5.0	4.5
S 36	1	3	1	2	3	19.0	16.5
Rigidity Group Three							
Subject 31	5	5	3	3	4	11.0	16.5
S 37	5	3	3	3	5	12.5	19.0
S 21	3	2	2	2	4	17.0	19.0
S 34	5	6	4	4	4	7.0	19.0
S 24	1	5	3	3	0	18.0	4.5

^a Each factor is represented by a C-score based on adults.

^b Highest rank for highest sum.

^c Highest rank for greatest variation.

rigid group of hysterics, leads one to postulate the following: As hysterics become sicker and more maladjusted, they are less able to meet their problems in terms of defenses based on evasive rigidity and these increasingly inadequate defenses begin to break down into a looser less organized form.

The relations of *STDCR* scores to the hysteric rigidity pattern groups are not so clear as they were relative to the normal subjects. Most of the trends that occur are most apparent when groups one and two are contrasted with group three. The hysterics of groups one and two show no uniformity in the kinds of descriptions they give of themselves; but the hysterics of group three give a very unfavorable description of themselves. Four out of five in this group obtain total *STDCR* scores below the middle rank position of the hysterics and they all tend to give individual factor scores that fall below the mean of the general population. Furthermore, while eleven of the twelve hysterics in groups one and two show at least moderate variation (ranks 1-14) in the range of their individual *STDCR* factor scores; four of the five group three

hysterics show very low variation (ranks 16-19) in their *STDCR* scores. That is, not only do the group three hysterics give an unfavorable description of themselves, but also they give the description in a gross generalized fashion that does not show discrimination for the single *STDCR* factors. These *STDCR* differences are logical in terms of the rigidity differences of the contrasting groups. That is, groups one and two are marked by their guardedness, their retreat to evasive rigidity when faced with problems. Contrastingly, group three shows much less guarding and is characterized by a loosening of rigidity defenses. Thus, the less guarded group tends to describe emphatically and openly its subjective unhappiness; while the more guarded evasive group is less able to do this. Of course, another point to consider is that the group one and two hysterics are not as ill and maladjusted as the group three hysterics; and so perhaps do not feel as subjectively disturbed as the latter group. However, an explanation based purely on degree of maladjustment would not provide an understanding of why certain specific group one and two hysterics with the most extremely rigid

patterns (but not the very best maladjustment scores) give descriptions of themselves which exceed in "goodness" the general population means.

3. Patterns in the Paranoid Group

The paranoid rigidity patterns cluster along the Rorschach maladjustment continuum into two very distinct groups. Within these groups there are certain subsidiary patterns which will also be noted.

Group one.—The profiles for this group are characterized by values of 2 or more in positions II and III and values of 1 or more (with a single exception) in position IV. Group one includes the fifteen subjects who have the lowest Rorschach maladjustment scores among the paranoids. These subjects tend to manifest relatively moderate to extremely high rigidity trends. In almost all instances they show themselves to be guarded and unable to mobilize increased flexibility when faced with stress or emotional demands. Their rigidity patterns correspond to the concept of the "rigid paranoid." Marked disturbance in the organization and balance of the pattern is clear in almost every instance. This disturbance shows itself either in terms of poor rigidity pattern balance scores or in the form of inappropriate peripheral flexibility.

Certain interesting pattern variations appear at the two *maladjustment extremes* of the cases in group one. Thus, the three *least sick* individuals in the group are associated with these patterns: 3 2 2 1, 3 3 2 2, and 2 2 2 0. They are less completely rigid and less subject to peripheral flexibility mobilizations. They do not retreat so strongly behind rigidity defenses when it is necessary to deal with a stress situation. At the other more maladjusted extreme of *group one* are also found individuals whose rigidity patterns tend to be less guarded and constricted than the middle segment of the cluster; but they, in contrast, show significantly more disturbance in balance scores and more peripheral irregularity than the least sick paranoids. In the one instance decreased rigidity implies less pathology and in the other it seems to imply more pathology.

Group two.—This group consists of the five paranoids who show the highest degree of maladjustment and looseness on the Rorschach test. The characteristic patterns have in common values of 1 in position III and (with one exception) values of 0 in position IV. These paranoids display much less rigidity than one finds associated with the other paranoids. Several do manifest rather high rigidity trends when dealing with situations that have only *peripheral* importance to them, but they make little attempt to guard themselves in *stress* situations by using

TABLE 21
RIGIDITY PATTERNS OF PARANOID SCHIZOPHRENICS
RANKED ACCORDING TO RORSCHACH MALADJUST-
MENT SCORES AND SEPARATED
INTO "CLUSTER" GROUPS

Group I	Group II
Subject 55	Subject 59
3 2 2 1	3 3 1 0
Subject 53	Subject 42
3 3 2 2	1 1 1 0
Subject 43	Subject 48
2 2 2 0	3 3 1 0
Subject 60	Subject 47
3 2 3 2	1 1 1 0
Subject 44	Subject 46
2 3 3 2	3 3 1 4
Subject 57	
2 3 3 1	
Subject 50	
3 2 3 3	
Subject 56	
1 2 3 2	
Subject 41	
3 2 3 2	
Subject 49	
2 4 2 1	
Subject 54	
2 4 3 2	
Subject 52	
2 4 3 1	
Subject 45	
3 2 2 3	
Subject 58	
3 2 3 5	
Subject 51	
3 2 2 3	

rigidity barriers. Indeed, relative to materials with emotional significance their flexibility is so extreme as to warrant the use of the term "loose." In contrast to the *group one* paranoids who, it may be postulated, are still seeking to defend themselves against their chief problems by a constriction process, these *group two* paranoids have tended to drop their defenses and seem to have given up trying to handle their problems actively. Of course, this last supposition applies in different degrees. Thus, two of the cases (subjects 42 and 47), do show an almost complete absence of rigidity at any level and furthermore manifest few signs of disturbance about the loose unrealistic level of adjustment to which they have regressed. But three subjects (59, 48, and 46) are able to maintain considerable *peripheral* rigidity when not subjected to stress demands; and furthermore their balance scores imply considerable disturbance.

Analysis of the STDCR scores in the two paranoid rigidity pattern groups indicates that with but a few exceptions the individuals in both of these groups tend to give scores higher ("better") than the general population means.

TABLE 22
INDIVIDUAL *STDCR* SCORES, RANKS OF *STDCR* TOTAL SCORES, AND RANKS OF *STDCR* VARIATION SCORES FOR THE PARANOID SCHIZOPHRENIC SUBJECTS IN EACH RIGIDITY GROUP

Subjects	S	T	D	C	R ^a	Rank of Sum of <i>STDCR</i> Scores ^b	Rank of Variation Scores ^c
Rigidity Pattern Group One							
Subject 55	3	9	8	10	2	7.5	2.0
S 53	4	3	3	3	4	18.0	19.5
S 43	6	4	6	6	4	13.5	14.0
S 60	6	7	8	7	5	6.0	12.0
S 44	5	6	4	3	8	13.5	4.0
S 57	8	9	8	8	5	2.0	6.0
S 50	5	8	9	9	6	3.0	6.0
S 56	5	10	8	8	0	9.0	1.0
S 41	2	5	3	3	1	19.5	9.0
S 49	9	10	10	9	6	1.0	6.0
S 54	4	5	5	5	4	15.0	18.0
S 52	5	9	7	6	3	10.0	3.0
S 45	4	2	3	3	2	19.5	15.5
S 58	7	7	9	7	5	5.0	9.0
S 51	5	8	7	6	6	7.5	13.0
Rigidity Pattern Group Two							
S 59	5	6	6	5	5	12.0	19.5
S 42	7	8	8	6	7	4.0	15.5
S 48	4	7	3	4	4	16.0	11.0
S 47	5	3	3	3	4	17.0	17.0
S 46	6	4	8	7	4	11.0	9.0

^a Each factor is represented by a C-score based on adults.

^b Highest rank for highest sum.

^c Highest rank for greatest variation.

That is, most of the paranoids give an at least moderately "good" descriptions of themselves. When applied to *group two* this fact might superficially seem to contradict what has been indicated about the looseness of defenses in that group; but if one assumes that a "good" self description represents only a peripheral kind of defensive effort, the apparent contradiction disappears. A comparison of groups *one* and *two* entirely in terms of the *paranoid STDCR* scores alone reveals that:

a. Nine of the fifteen subjects in *group one* have total *STDCR* scores which *equal or exceed* the middle rank position of the *paranoid group*; whereas

b. Four of the five subjects in *group two* have total *STDCR* scores *below* the middle rank position of the *paranoid group*.

c. Ten of the fifteen subjects in *group one* *exceed* the middle rank *STDCR variation* score of the *paranoid group*; whereas

d. Four of the five subjects in *group two* fall *below* the middle rank *STDCR variation* score of the *paranoid group*.

Apparently, the more rigid guarded paranoids

not only *tend* to exceed the *general population* in the favorableness of their self descriptions but also to exceed the less rigid paranoids in this respect. However, despite their greater guardedness the *group one* paranoids show more variability (actually more selective discrimination) in their responses to the range of *STDCR* factors.

It may be pointed out that this difference in *variation* between the more and less maladjusted pattern groups holds true also for the normals and hysterics—perhaps implying some kind of rough relationship between the amount of discriminative variation shown in answering *STDCR* questions and degree of maladjustment.

4. Summary of Section

In general terms, the following has been shown in this section:

a. Each subject's rigidity scores may be expressed as a pattern which has a fairly precise meaning relative to such criteria as Rorschach maladjustment

TABLE 23

SUMMARY TABLE SHOWING FOR THE THREE GROUPS THE DISTRIBUTIONS OF RIGIDITY PATTERN PROFILES, RANKED ACCORDING TO CORRESPONDING RORSCHACH MALADJUSTMENT SCORES

Rank	Normal	Hysteric	Paranoid
1			3314
2			1110
3			3310
4			1110
5			3310
6			3223
7			3235
8		1322	
9		2220	
10		3122	
11			2431
12			3223
13			2432
14			2421
15			3232
16		3332	1232
17			
18		1112	
19	3223		
20		3332	
21			3233; 2331
22			2332
23			
24		3232; 2421	
25			
26		2431	
27			2220
28		3433	3232
29			
30		1230; 3231	
31			
32			
33		3212	
34			3322
35		2430	
36		2331	
37			3221
38	3225		
39	3112		
40			
41	1112; 3112		
42			
43			
44	2221; 2223		
45			
46	1113; 2112		
47			
48	1111; 2311		
49			
50	2112	1430	
51	1110		
52			
53	1420		
54	1220		
55		2330	
56	1220		
57	1110		
58			
59	1211		
60	1110		

scores, clinical symptoms, and STDCR scores.

b. Four rigidity patterns may be discerned in the normal group. These are listed in the order of their degree of maladjustment (from low to high): (1) A low rigidity group marked by a high degree of balance in level relations. (2) A more constricted group whose rigidity pattern is however characterized by balance and unified coordination. (3) A group showing few generalized rigidity trends, but characterized by moderate disturbance in rigidity *balance*, and tendencies toward inappropriate mobilizations of peripheral flexibility. (4) A group marked by extremely high disturbance in rigidity balance.

c. Three rigidity patterns may be detected in the hysteric group. These patterns are meaningful in terms of Rorschach maladjustment scores and also clinical symptoms. (1) A very constricted pattern group with only moderate rigidity balance disturbance. Clinical symptoms in this group are limited to localized pain. (2) A constricted group with an extremely high degree of rigidity balance disturbance and much unusual peripheral flexibility. Clinical symptoms are of a more general character. (3) A relatively less rigid, looser group which also manifests much disturbance in rigidity balance. Clinical symptoms are very extensive and serious (e.g., prolonged convulsive seizures).

d. Two rigidity patterns appear in the paranoid group. These are listed in their order of Rorschach maladjustment (low to high): (1) A highly constricted rigid group manifesting much disturbance in rigidity balance and a tendency toward inappropriate peripheral flexibility. (2) A loose group chiefly characterized by its low degree of defensive guarding.

e. The self description given by a sub-

ject on the Guilford STDCR test has a functional relationship to the pattern of his rigidity defenses. However, it is a relationship that varies with the clinical group in which it occurs. Thus, normal subjects whose rigidity defenses are in a state of disturbance and who manifest unusual peripheral flexibilities give a very favorable self description. In both the hysteric and paranoid groups the most favorable self description is given by those individuals who are the best organized and whose rigidity defenses are in a state of tight constrictive guarding. Least favorable self descriptions are given by those whose rigidity is diminished and whose rigidity patterns tend toward looseness and "breakdown."

F. DIAGNOSTIC DIFFERENTIATION

The previous analysis has indicated that rather distinct sub-groups can be identified *within* each of the principal experimental groups. The question arises as to the possibility of using rigidity scores as an independent means of diagnosis—i.e., as a means of distinguishing normals from persons identified psychiatrically as sick and also of distinguishing persons in different psychiatric categories. Specifically, can rigidity scores be used to differentiate the normals from the hysterics and paranoids? Furthermore, can the hysterics be differentiated from the paranoids?

* The rigidity balance score does not

successfully give such differentiation. Even in terms of mean differences the normals are only moderately well separated from the other groups (although these differences are statistically significant) and the hysterics are not significantly differentiated from the paranoids.

In an attempt to work out a technique that would be more successful for diagnostic differentiation, several scoring systems were attempted. One such scoring technique based upon a series of penalty weights for all instances of unusually high or low peripheral rigidity, all instances of unusually low ability to mobilize flexibility for meeting stress situations, and all instances of unusual differences in rigidity for tasks at the same rigidity level proved to be moderately differentiating. It differentiated the normal subjects from the hysterics and the paranoids excellently. However, it failed to distinguish the hysterics from the paranoids successfully. That is, it was possible to separate those who seem to be making a normal adjustment from subjects who are clinically diagnosed as abnormal. However, since the primary purpose of this study is an analysis of rigidity phenomena and only very secondarily a consideration of diagnostic differentiation, the rather complicated weighting system evolved for the above is not described.

In general, the rigidity battery seems to have greatest potential usefulness in

TABLE 24

CONSTANTS OF THE DISTRIBUTIONS OF RIGIDITY BALANCE SCORES IN THE THREE EXPERIMENTAL GROUPS, AND DIFFERENCES IN BALANCE SCORES AMONG THESE GROUPS

Constants	N	H	P	N+H	N+P	H+P
M	+3.7	-8.4	-14.0			
σ	5.3	16.5	17.5			
σ_m	1.2	3.8	4.0			
D				12.1	17.7	5.6
σ_{diff}				3.9	4.1	5.5
C.R.				3.1	4.3	1.0

cases where other material (e.g., clinical behavior or psychological test results) identify an individual's illness rather definitely as being neurotic in contrast to psychotic—or vice versa. In such cases (as shown in the section of analysis of individual patterns) the rigidity scores are valuable for perceiving the kind of defenses an individual is relying on; how disturbed or unstable these defenses are;

and how near they lie to the point of extremely serious disorganization. Thus, for example, one would have a better understanding of the seriousness and prognosis of a case of conversion hysteria if it were known whether the rigidity pattern was dominated by tight constriction, or unusual degree of peripheral flexibility, or perhaps tendencies toward looseness.

CHAPTER V

GENERAL DISCUSSION OF DATA

AS IN many other studies which attempt to get at some aspect of personality, the problem of specificity-generality has arisen prominently. That is, the question has been raised whether the rigidity phenomena here observed can possibly be explained either in terms of a "general rigidity" concept or in terms of specific, rather unrelated reactions to particular stimuli. The character of the results obtained imply that personality rigidity manifestations cannot accurately be described either in very specific terms or in very general terms. Neither single rigidity task scores nor gross summations of many scores have proved to be meaningful explanatory. In contradiction to such simple explanatory approaches, one is struck by the degree of complexity in the interrelations of the various rigidity measures. It is possible to note simultaneous correlated, contradictory, and complementary rigidity trends in the same subject. Indeed, aspects of the overt rigidity behavior of an individual may imply just the opposite of what is true with regard to that individual's basic rigidity pattern. For example, essentially rigid conversion hysterics or disturbed normals who are becoming increasingly rigid often display flashes of unusual flexibility when dealing with certain kinds of situations.

The data here obtained suggest that there is a reasonable basis for assuming that there are at least two roughly defined rigidity levels in any given personality structure—an *ego* level and a *peripheral* level. That is, if one observes the range of rigidity shown by individuals in meeting different kinds of situations, it becomes rather apparent that

one can at least differentiate the degree of rigidity shown to situations that are not emotionally threatening from the degree of rigidity shown to those situations that do threaten the individual or somehow do call into question his self-esteem. The type of rigidity shown in reacting to the first kind of situation may be designated as *peripheral* or outer rigidity; whereas the second type of reaction may be called *ego* or "inner" rigidity.¹ If one postulates that the character of peripheral (outer) rigidity represents how much need the individual has to guard himself even in non-threatening situations and further assumes that ego (inner) rigidity represents the degree of defensive guarding an individual mobilizes when faced with emotional demands or threats, it may then be hypothesized that the pattern of relationships between these two levels gives us at least a vague picture of the manner in which a given individual's personality defenses are organized.

In these terms the defenses of a normal undisturbed person are marked by a series of balanced relationships between the inner level and the outer level. Their peripheral defenses usually manifest a certain basic minimum of rigidity; and the ego defenses show a consistent ability to mobilize a greater degree of flexibility than is habitually shown by the peripheral defenses. This relative relation is very important. There are several instances in which undisturbed normals

¹ Although empirically the rigidity tasks were assumed to fall at three levels, it is not felt that the differences between levels II and III were marked enough to warrant a reliable conclusion as to the existence of defense levels intermediate between peripheral and inner defenses.

demonstrate considerable rigidity at both levels; but these individuals are consistently able to call up a degree of flexibility for meeting stress situations that exceeds their customary outer rigidity. If such a normal person encounters problems or stresses that he cannot handle adequately with his current rigidity defenses, interesting adjustive changes begin to show up in his rigidity behavior. Disturbances in the peripheral defenses begin to appear. The balance of moderate to moderately high rigidity that previously characterized this level gives way to erratic fluctuations that vary from high rigidity to extremely high flexibility. Many situations that were previously adjusted to in terms of customary outer defenses can no longer be handled that way. The individual seems to be uncertain as to just how much he can count on his outer defenses and consequently many formerly "peripherally handled" situations become involved with ego defenses—with resultant erratic variations in the kind of rigidity shown at the peripheral level. As the individual's disturbance becomes even greater, his ego defenses become more seriously affected. They shift sharply in the direction of greater rigidity. They tighten and the ability to mobilize increased flexibility for meeting emergencies diminishes significantly.

Passing from the normal to the conversion hysteric, one finds a rigidity defense pattern which is only a more extreme form of that seen in the very disturbed normal. However, in these hysteric cases rigidity at both defense levels is usually much greater, and the outer defenses are even more disturbed. But most outstanding of all is the fact of extremely increased ego-level constriction; the fact that stress demands seem to call forth

only evasive retreat behind rigidity barriers. It is interesting to note that some few of the hysterics are characterized by a very rigid defense pattern and yet show only moderate peripheral disturbance and few signs of pattern instability. These are perhaps individuals who have worked out a neurotically constricted defense system capable of bearing with some efficiency the pressure of their current difficulties. In the most radically disturbed conversion hysterics one perceives a sharp shift in the pattern of rigidity defenses. An uncoordinated loosening of both the outer and inner defense levels appears. Disturbance persists in the form of erratic peripheral fluctuations and lack of balanced relationship between ego and peripheral barriers; and the individual no longer makes much attempt to deal with situations by retreating behind his rigidity defenses. At this stage of disturbance defenses dominantly based on *retreat to rigidity* are apparently no longer sufficient. Transition to a looser more regressive type of defense system seems to be in progress. This latter assumption is confirmed by the fact that regressive symptoms (e.g., generalized convulsive seizures) begin to appear in such cases.

Those paranoid schizophrenics who retain considerable control in their behavior and who are still strongly motivated to conceal and rationalize their psychotic thinking seem to make much use of rigidity in both their outer and inner defenses. They have a set to deal with situations in terms of minimum involvement. In general, however, their defenses tend not to be so completely closed and rigid as is the case with the middle group of *conversion hysterics*. There are more instances in which the ego defenses of these paranoids are not

completely rigid barriers. But since their defenses are almost always in a state of high disturbance one can only interpret the lesser rigidity as a sign of greater vulnerability to disturbing stimuli. Paranoids who clinically (and in terms of psychological measures) seem to be sickest and most disorganized no longer make much genuine use of rigidity barriers. Although many of them have outer defenses which are very rigid, they do not seem to have any real inner defenses. This is demonstrated by the fact that demands which manage to evade their outer defenses or which are too stressful to be blocked peripherally, call forth very *loose*, obviously psychotic, reactions. Such reactions can rarely be called forth in the paranoid whose rigidity pattern indicates much rigidity at the ego level.

Altogether, this preliminary attempt to sketch in semi-precise terms the kinds of personality defense changes that accompany different degrees of personality maladjustment seems to give a meaningful consistent picture.

One very interesting problem that the above analysis of diagnostic groups brings to the fore has to do with the meaningfulness of our present diagnostic categories. Even if one grants that certain of the experimental subjects were incorrectly diagnosed, the fact remains that each of the experimental diagnostic groups includes *many* persons whose personality defenses seem to be organized in significantly different patterns. For example, among the conversion hysterics there are defense patterns marked by extreme rigidity at all levels and contrastingly there are patterns which are *loose* at all levels. The fact that these rigidity pattern differences are also frequently accompanied by radical differences in symptomatology leads one to

think critically about the rationale of present classification schemes. At present, of course, psychiatric diagnosis is primarily a matter of evaluating symptomatology; but one may ask how valid such a procedure is if it leads to the grouping together of individuals whose personality defenses are apparently quite different. If future work with other fairly precise personality measures should confirm the kind of data here obtained about diagnostic groupings, serious criticisms might be raised against these groupings. It is obvious that important errors in treatment and understanding may result from assuming that a conversion hysteric "type A" is equivalent to a conversion hysteric "type B," or that a paranoid schizophrenic "type A" is equivalent to a paranoid schizophrenic "type B." The actual isolation of such types in a very exact sense could probably be achieved if a body of data were systematically accumulated about a range of personality defense phenomena, as has been done here relative to rigidity phenomena. The specific diagnostic value of the present approach to rigidity seems to lie in the fact that it can give valuable information relative to variations *within* diagnostic categories. Although it is true that when used alone the rigidity battery is at present able to distinguish only normals from abnormals, it is capable of giving very interesting insights into individual cases when used in conjunction with other materials (e.g., the Rorschach test). It may be added that the rigidity battery seems to have a high degree of sensitivity for detecting disturbance in normals. If further work with normals confirms this point, it is possible that an abbreviated form of the battery would prove of value in certain types of selection work.

Many of the points that have emerged

from the data have already been implicit or explicit in previous work. Thus, the whole viewpoint that has been expressed here with regard to *levels of rigidity* and the distinction between *outer* and *inner* rigidity has run through the thinking of psychologists and psychiatrists for several decades. It has been particularly marked in the thinking of the Lewinians, whose elaborate personality-structure scheme is preloaded with concepts like "sub-wholes of the personality structure," "ego barriers," and "peripheral barriers." Certain of the very specific findings of the present study (e.g., with regard to the rigidity of the conversion hysteric and the paranoid schizophrenic) have also been anticipated in previous work (Angyal, Shakow, and Rosenzweig). Actually, the value of the material presented in this paper lies not so much in its *specific* novelty, but rather in the fact that it represents at least an *initial* integration and confirmation of past isolated guesses and findings about rigidity behavior. Furthermore, it has value insofar as it has rationalized a particular set of measuring procedures that are based on a systematic point of view. Vague speculations about ego and peripheral defenses or changes that occur in these defenses under differing conditions are now subject to some kind of quantitative checks, even though they be only crude approximate checks.

In view of the importance that has been placed on the concepts of "ego" and "peripheral" rigidity in this study, it is pertinent that the conclusions reached here concerning them be related to previous work in the same area. The most extensive past experimental consideration of these concepts occurs in the series of "task-interruption" studies done by Rickers-Ovsiankina (17) and Bennett (5). Rickers-Ovsiankina found that schizophrenic subjects tended *not* to build up "completion tensions" relative to neutral tasks—as exemplified by the fact that they generally failed to resume such tasks following the

removal of interposed interruptions. From such data she concluded that the outer peripheral boundaries of the schizophrenic are so fluid that tensions raised by neutral tasks are dissipated before they can form firmly segregated systems. Bennett then demonstrated that if schizophrenics are interrupted while performing tasks with real *emotional* significance to them, they manifest strong "completion tensions." She reasoned that this must imply that emotional materials have an opportunity to excite segregated tension systems because there are rigid barriers around the schizophrenic's ego area that prevent dissipation of tensions. That is, she demonstrated a real difference in the rigidity of ego boundaries as contrasted with peripheral boundaries. Furthermore, she (5, p. 241) noted that "in the central layers of the [normal] person, . . . communication [between systems of the central layers] seems to be even greater than that for peripheral systems." In a broad sense the results of the present study have been congruent with these interpretations based on task-interruption data. Thus, the ego-peripheral rigidity distinction has demonstrated itself clearly. Furthermore, it is particularly interesting that Bennett's conclusions regarding the lesser rigidity in *normal subjects* of ego areas as contrasted with peripheral areas has also been confirmed here.

However, there is one important point on which the present study stands in disagreement with the conclusions of Rickers-Ovsiankina and Bennett. This is relative to the first investigator's acceptance of the idea that the peripheral boundaries of schizophrenics are *in general* fluid and the second investigator's statement that the ego boundaries of schizophrenics are *in general* rigid. In terms of the complex variations in ego and peripheral rigidity found here in paranoid schizophrenics the above conclusions are misleading simplifications. Even within the limited range of a paranoid schizophrenic group one finds many cases of high peripheral rigidity, low peripheral rigidity, and also cases of marked ego fluidity and ego rigidity. As one reviews the data of Rickers-Ovsiankina and Bennett, one feels that a similar complexity actually characterized their results. However, it would appear that in the process of emphasizing and sharpening group comparisons they leaned toward excessive simplification. Their failure to underscore the complexity of rigidity phenomena may possibly also be attributed to the following: (1) The fact that their methods of measurement dealt with such a limited *sampling of behavior*. (2) The fact that they both assume that failure to develop completion tensions is due *only* to the absence of barriers necessary to prevent the dissipation of tensions. If one assumes that failure to develop completion tensions may be

due also to failure of tasks to *excite motivation* by *penetrating* rigidity barriers, the possibility of a more complex interpretation of their data arises. That is, one should at least accept the *possibility* that failures to develop completion tensions may have alternative causes. On the one hand it may in some cases be due to high fluidity and in other cases it may be due to high rigidity.

Altogether, there seems to be justification for questioning the generalizations about peripheral and ego rigidity in schizophrenics that have been offered by Rickers-Ovsiankina and Bennett.

While working with the present rigidity battery certain problems and difficulties have become apparent which suggest several future research possibilities on the rigidity question.

1. First of all, it is clear that it would be desirable to work out a more balanced series of rigidity tasks—that is, a series in which ego-level

tasks would not be so outnumbered by peripheral tasks, and in which at least one other defense level is identified between the peripheral and ego levels. Such refining of the rigidity battery would perhaps lead to more precise generalizations about rigidity relations, and possibly permit better discrimination of clinical groups.

2. Since this study was limited to women of three specified kinds of groups and of a particular range of intelligence, it is of course necessary to determine whether the results obtained apply to a wider range of subjects and how they are affected by extremes of intelligence.

3. Another interesting possibility would be a study of changes that occur in rigidity patterns when attempts are made to produce shifts in adjustment during different kinds of therapy. Thus, one might measure changes following electric shock. This approach might better our understanding of what kinds of defense reorganizations occur during such procedures. It would also be of special interest to work out the possible *prognostic* value of the rigidity measures.

CHAPTER VI

GENERAL SUMMARY OF FINDINGS

THE findings described below are based on a study of sixty women of average intelligence—twenty normal subjects, twenty conversion hysterics, and twenty paranoid schizophrenics. The chief points that emerge most clearly from the study may be summarized as follows:

1. No single rigidity measure based on any one task is successful either as a measure of "general" personality rigidity trends or of personality characteristics that might be thought of as related to rigidity.

2. Analysis of the relationships obtaining between total rigidity scores (a summation of many individual rigidity scores) and various other indices (e.g., Rorschach rigidity scores and clinical classification) of personality rigidity indicate that the total rigidity score is a moderately good measure of what might be called "general" rigidity trends. However, it has also been shown that the concept of general rigidity as a real entity is to a considerable degree fictitious and that one should probably not anticipate more than very moderate success in attempting to measure such a variable.

3. It has been shown that *in general* conversion hysterics and paranoid schizophrenics are more rigid than normal subjects. However, there are no clear differences between the conversion hysterics and paranoids.

4. It appears to be fruitful to conceive of rigidity behavior as correlated with a series of "defense levels" in the personality structure. The degree and character of the rigidity shown by an individual in dealing with a given situation seems to vary in proportion as that situation poses a threat or raises serious adjust-

ment demands. In the normal personality certain optimum "ratios" are found to exist if one compares the amount of rigidity shown when dealing with non-threatening (peripheral) tasks as opposed to the amount of rigidity shown for threatening (ego involving) tasks. If the ratio or relation of ego level rigidity to peripheral level rigidity is for each individual expressed as a quantitative score indicating degree of departure from an ideal optimum ratio, correlations of such scores with certain measures of personality defense disturbance (e.g., the Rorschach and clinical symptoms) are significantly high.

5. Intelligence, in the formal psychometric sense, seems to have no clear relationship to the character of an individual's rigidity pattern—i.e., the relations obtaining between the rigidity of the peripheral defenses and ego defenses.

6. It is clear that personality rigidity may manifest itself in diverse, often unrecognized ways. Indeed, internal personality rigidity may show itself externally in a form that appears to be just the opposite of rigidity and even seems to imply extreme flexibility. Thus, numerous examples have been found in the data of subjects who are fearful and highly rigid in adjusting to ego involved situations; but who mobilize an unusual amount of unnecessary flexibility in adjusting to peripheral unimportant tasks. This non-functional and superfluous peripheral flexibility seems to represent a false "emergency reaction," a compensatory effort stimulated by the insecurity associated with an overly rigid ego defense system.

7. A "rigidity profile" may be con-

structed for each subject. This profile defines the nature of an individual's rigidity behavior in terms of four variables:

(a) The degree to which the individual's ratio of peripheral to ego rigidity departs from an ideal "normal ratio."

(b) The degree to which the individual's reactions seem to reflect a generalized rigidity that cuts across a wide range of response.

(c) The degree of rigidity shown when dealing with situations of a threatening or ego significance.

(d) The degree to which the individual seems to mobilize unusually great or unnecessary flexibility in meeting situations not usually conceived as ego involving.

It has been shown that within each of the experimental groups the "rigidity profiles" of subjects fall very logically into clusters. Those clustering together have approximately the same Rorschach maladjustment scores and display very marked similarities in clinical symptomatology.

8. The variety of "rigidity profiles" falling within the same diagnostic groups raises some doubt as to the rationale of present diagnostic classification schemes. Such questioning would have a more valid basis if confirmed by studies of other personality characteristics making use of at least moderately precise measures.

9. There are indications that the description which a subject gives of himself on the Guilford STDCR is functionally related to the kind of "rigidity profile" manifested by him. That is, those subjects whose "rigidity profiles" fall into the same clusters because of similarities in pattern tend also to give similar responses to questions about themselves on

the STDCR. For example, all those normal subjects whose "rigidity profiles" are marked by unusual deviations from the ideal "normal ratio" of ego to peripheral rigidity and also by frequent unnecessary mobilizations of flexibility in the face of non-threatening tasks give very favorable descriptions of themselves. They may be contrasted with those normal subjects whose "rigidity profiles" show no such disturbance and who comparatively do not give extremely favorable or "good" STDCR descriptions of themselves. In general, the indications are that it is not possible to detect the clusters of subjects with similar STDCR scores or to explain the logic of such clusters without using the "rigidity profile" as a frame of reference.

10. It is possible in a statistically significant manner to differentiate the normal subjects from the abnormal subjects by use of various single rigidity indices (e.g., the total rigidity score or the ratio of peripheral to ego rigidity). However, this kind of differentiation is only on a rough group basis and not of sufficient clarity to permit the use of such measures as individual diagnostic tools in the conventional sense of the present diagnostic system of classification. The greatest "diagnostic" contribution of the rigidity battery seems to be toward detailed differentiation *within* clinical groups. Thus, by use of the "rigidity profile" it has been shown that one can with considerable accuracy discriminate disturbed normal subjects from well adjusted normal subjects (as defined by the Rorschach), conversion hysterics with limited localized symptoms from hysterics with more serious generalized symptoms, and well protected paranoid schizophrenics from more seriously disorganized paranoid schizophrenics.

APPENDIX I

VIGOTSKY SCORING

To score the Vigotsky sortings the following weighting system was used.

5 = A *basic* variation. This included all sortings in which the *total range* of blocks was divided into groups on the basis of *size or shape or color or number of sides*.

3 = For any variation in which the subject attempts to put one of each "kind" in each of the sorted groups. Thus, relative to form, this would be illustrated by a series of groups each containing a square, circular, and hexagonal block. Relative to color, it would be illustrated by a series of groups each containing five repre-

sentative colors.

2 = A minor variation. Any repetition of a previous *basic* sorting—but with at least some minor change in the previous distribution of the blocks.

1 = Concrete variation. Any use of the blocks to make concrete objects or to build designs in jig saw fashion.

The above weighting system is based on clinical experience with the Vigotsky and is intended to assign each sorting to a level corresponding roughly to the complexity of analysis or abstraction involved.

APPENDIX II

TAT SCORING

The following weighting system was used to score TAT interpretations.

2 = A *basic*¹ interpretation which involves *all of the pictured persons* and revolves about a plot in which the *characters do something or are acted upon*.

2 = This weight also given for an interpretation which employs the same characters as a preceding *basic* interpretation—but which re-

volves about a plot in which the characters do something different or are acted upon differently.

1 = Given for an interpretation with different role takers than a preceding interpretation—but with the same plot or kind of action.

1 = Given for any basic interpretation which ignores any outstanding figure on the card.

0 = For mere card description or rejection of a card.

APPENDIX III

ASPIRATION SCORING

The following weighting system was used to evaluate aspiration changes that occurred following arbitrarily reported achievement scores. The

table below is the basis for deriving three aspiration rigidity scores, as described in Chapter III, section B, 10.

Relation of Subject's Aspiration Shift to Shift in Arbitrarily Reported Performance Score	Weight
Aspiration shift is in desired direction and exceeds the arbitrary reported achievement shift by at least 2 points	+3
Shift ^a equals the arbitrary reported achievement shift	+2
Shift is less than the arbitrary reported achievement shift, but not less than one-half of the achievement shift	+1
Shift is less than one-half the arbitrary reported achievement shift	0
No shift in aspiration—when arbitrary reported achievement shift is only one point and subject's previous aspiration is more than two points distant from perfect achievement	-1
No shift in aspiration	-2
Shift in aspiration is <i>opposite</i> to arbitrary reported achievement shift ^b	-3

^a If the arbitrary change reported to the subject is only one point greater than his previous aspiration and if the previous aspiration was more than two points distant from perfect achievement, a plus one is given instead of plus two.

^b In evaluating the aspiration changes that occur with increasing failure only one-half of any positive credit (to nearest fraction) is given which might be earned on the *last* trial.

In a few cases where the character of the subject's expressed aspirations made it impossible to obtain four trials in the "success" series, the

three obtained trials were equated to four by adding the average of the major trend (with fractions disregarded).

APPENDIX IV SCORING FOR RORSCHACH RIGIDITY

Each of the weights below is a penalty for what is considered to be excess rigidity or restrictiveness. The larger the final summation of weights, the greater is the implied rigidity.

F per cent (F%)

- (1) If the number of responses is 22 or fewer—
 - (a) An F% of 55-60 gives a score of 3.
 - (b) An F% of 61-70 gives a score of 4.
 - (c) An F% of 71-80 gives a score of 6.
 - (d) An F% of 81-90 gives a score of 8.
 - (e) An F% of 91-100 gives a score of 11.
- (2) If the number of responses is over 22—
 - (a) An F% of 55-60 gives a score of 4.
 - (b) An F% of 61-70 gives a score of 5.
 - (c) An F% of 71-80 gives a score of 7.
 - (d) An F% of 81-90 gives a score of 9.
 - (e) An F% of 91-100 gives a score of 12.

Number of Responses (R)

- (1) If the number of responses lies between 0 and 15, inclusive, the score is 9.
- (2) If the number of responses lies between 16 and 20, inclusive, the score is 6.

Percentage of Animal Responses (A)

- (1) If the percentage of "animal" responses is 60-70, the score is 6.
- (2) If the percentage of "animal" responses is 71-80, the score is 8.
- (3) If the percentage of "animal" responses is 81-90, the score is 10.

Form Accuracy (F+)

- (1) If the number of responses lies between 15 and 22, inclusive—
 - (a) And if the F% is at least 40 and not higher than 50—

An F+ of 85-90 gives a score of 5.
 An F+ of 91-100 gives a score of 8.
 (b) Or if the F% is 51 or higher—
 An F+ of 85-90 gives a score of 6.
 An F+ of 91-100 gives a score of 9.

If a record contains fewer than fifteen responses only one-half of any given weight applies.

¹ For three of the cards (I, III, and VIII) a given basic variation or any other variation could earn only one credit. This was done because of the ease with which most subjects worked out interpretations for these cards that concealed rigidity tendencies on more "difficult" cards.

- (2) If the number of responses exceeds 22—
 - (a) And if the F% is at 35 and not higher than 50—

An F+ of 85-90 gives a score of 6.
 An F+ of 91-100 gives a score of 10.
 (b) Or if the F% is 51 or higher—
 An F+ of 85-90 gives a score of 6.
 An F+ of 91-100 gives a score of 12.

Card Turning

Less than two responses in which the card is viewed other than in the upright position gives a score of 4.

Color

Less than two FC responses is scored 6. (MFC is not counted as an FC)

Whole Responses (W)

- (1) If the percentage of W responses is 40-50—
 - (a) The score is 5 in records where the number of responses is 22 or under.
 - (b) The score is 6 in records where the number of responses exceed 22.
- (2) If the W% is 51-60—
 - (a) The score is 7 where the number of responses is 22 or less.
 - (b) The score is 9 where the number of responses is over 22.
- (3) If the W% is 61 or over—
 - (a) The score is 10 where the number of responses is 22 or less.
 - (b) The score is 12 where the number of responses is over 22.

Small Detail Responses (Dd)

- (1) If the Dd% is 18-23—
 - (a) The score is 3 where the number of responses is under 22.
 - (b) The score is 4 where the number of responses is over 22.
- (2) If the Dd% is 24-30—
 - (a) The score is 5 where the number of responses is 22 or under.
 - (b) The score is 6 where the number of responses is over 22.
- (3) If the Dd% is 31-40—
 - (a) The score is 8 where the number of responses is 22 or under.
 - (b) The score is 9 where the number of responses is over 22.
- (4) If the Dd% is 41 or over—

(a) The score is 10 where the number of responses is 22 or under.

(b) The score is 11 where the number of responses is over 22.

Movement Responses (M)

(1) If number of movement responses is less than two the score is 15.

(2) If the number of movement responses is less than one the score is 20.

Content

If four or more responses fall into the same content category (aside from "human" and "animal" responses)—

(a) And if the number of responses is 1 through 25 the score is 7.

(b) And if the number of responses is 26 through 40 the score is 6.

(c) And if the number of responses is 41 or over, the score is 5.

Average Time Of Initial Response (T/IR)

If average reaction time per initial response is

(a) 25 through 29 seconds, the score is 2.

(b) 30 through 40 seconds, the score is 5.

(c) Over 40 seconds, the score is 7.

Shading Responses (FY)

Less than two FY responses gives a score of 3.

APPENDIX V

SCORING FOR RORSCHACH MALADJUSTMENT

Each weight given below is a penalty for what is considered to be an indicator of personality maladjustment.

Small Detail Responses (Dd)

(1) If the Dd% is 18-25 inclusive, the score is 2.

(2) If the Dd% is over 25, the score is 8.

Whole Responses (W)

(1) If the W% is 30-35 inclusive—

(a) The score is 6 if the number of responses is 16-25.

(b) The score is 7 if the number of responses is 26 or higher.

(2) If the W% is 36-40 inclusive—

(a) The score is 8 if the number of responses is 16-25.

(b) The score is 10 if the number of responses is 26 or higher.

(3) If the W% is 41 or higher—

(a) The score is 12 if the number of responses is 17 or over.

(b) The score is 8 if the number of responses is 14-16.

(c) The score is 6 if the number of responses is 11-13.

(d) The score is 4 if the number of responses is 9-10.

Only one-half of any of the above penalty weights is given if more than one-half of the responses in the record are not minus or undifferentiated type of color responses (viz., CF and C).

Furthermore, except within the range 41% or higher, only one-half of a penalty weight is given if the number of responses in the record is less than 16.

(4) If the W% is less than 15, the score is 2.

(5) If the W% is less than 10, the score is 3.

(6) If one-fourth or more of the W's in a record lie beyond the middle of the response sequence of the particular cards on which they occur, the score is 3.

(7) If the sequence is confused, the score is 5.

Movement Responses (M)

(1) If the number of M's is less than 3—

(a) The score is 3 if the number of responses is 18 or less.

(b) The score is 5 if the number of responses is 19 or more.

(2) If the number of M's is less than 2—

(a) The score is 10 if the number of responses is 18 or less.

(b) The score is 12 if the number of responses is 19 or more.

(3) If the number of M's is less than 1—

(a) The score is 14 if the number of responses is 18 or less.

(b) The score is 16 if the number of responses is 19 or more.

(4) If an M does not occur on card III, the score is 6.

(5) One M of bad form quality (M minus) equals a score of 3.

(6) Two M minus responses equal a score of 10.

(7) Four M minus responses equal a score of 12.

(8) If 2-3 M's occur in small details, there is a score of 4.

(9) If 4 or more M's occur in small details, the score is 7.

(10) If there are over two M's in a record and if half or more are found beyond the middle of the cards on which they occurred, the score is 5.

Loose Color or Color of Poor Quality
(C, CF—, FC—)

(1) A pure color response (C) without any form is equal to a score of—

- (a) 3 on card X.
- (b) 2 on cards II or III.
- (c) 2 on card VIII.
- (d) 1 on card IX.

(2) A color response with some minimum form but of poor quality (CF—) and containing either blood content, fire content or anatomy content gives—

- (a) A score of 3 on cards II, III, or IX.
- (b) A score of 4 on cards VIII or X.
- (3) Minus FC responses
- (a) One FC minus response equals a score of 2.
- (b) Two FC minus responses equal a score of 6.
- (c) Three or more FC minus responses equal a score of 8.

Absence of Color

(1) If color response involving a good integration of form and color (FC+)

(a) Is absent on cards II and III, the score is 6.

(b) Is absent on cards VIII, IX, and X, the score is 9 (if FC given as last response on X, the score is 4).

(2) No color in the total record gives the score of 4.

(3) If there is only one FC in the total record and the rest of the color is C and CF minus, the score is 3.

Color Naming (CN)

(a) CN on one card equals a score of 12.

(b) CN on two or more cards equals a score of 16.

Form Quality (F+)

(1) If F+ is from 57 to 64 inclusive—

(a) An R of 15 through 20 (if less than 15 R, at least 9 of responses should be in the F category) will give a score of 5 for an F% 45-55; and a score of 7 for an F% of 56 and over.

(b) An R over 20 will give a score of

4 for an F% of 35-45.

6 for an F% of 46-55.

8 for an F% of 56 and over.

(2) If F+ from 50 through 56—

(a) An R of 13 through 20 will give a score of 7 for an F% of 35-40.

10 for an F% of 41-50.

12 for an F% of 56 and over.

(b) An R over 20 will give a score of

10 for an F% of 35-40.

15 for an F% of 41-50.

20 for an F% of 56 and over.

(3) If F+ is under 50—

(a) An R of 10 through 13 will give a score of 8 for an F% of 35-40.

10 for an F% of 41-50.

15 for an F% of 51 and over.

(b) An R of 14 through 20 will give a score of 12 for an F% of 35-40.

18 for an F% of 41-50.

25 for an F% of 51 and over.

(c) An R over 20 will give a score of

18 for an F% of 35-40.

25 for an F% of 41-50.

30 for an F% of 51 and over.

Very Poor Form Quality

If a response is F minus, is a severe departure in form from the card area used, and contains very peculiar or fantastic content (e.g., "people catching blood in a cup," "dirty uterus," "inside of a womb"), that response is scored 5.

Number of Responses

(1) If there are less than 20 responses, the score is 2.

(2) If there are less than 15 responses, the score is 5.

(3) If there are less than 12 responses, the score is 9.

Average Time of Initial Responses (T/1R)

(1) If the T/1R is 25 through 35 seconds, the score is 2.

(2) If the T/1R is 36 seconds or greater, the score is 3.

Rejection of Cards

(1) Rejection of card I or IV or VI or IX equals a score of 7.

(2) Rejection of card II or III or V or VII or VIII or X equals a score of 9.

(3) Rejection of two cards in sequence results in an extra penalty of 5. (No more than two rejections, one for each of above categories, is counted).

Shading Responses

(1) 1 to 2 pure shading responses (Y) is scored 2.

(2) 3 to 4 pure Y responses is scored 4.

(3) 5 or more pure Y responses is scored 6.

(4) 2 to 3 shading responses with little form (YF) is scored 2.

(5) 4 or more YF responses is scored 5.

White Space Responses (S)

(1) 4 to 5 S responses is scored 2.

(2) 6 or more S responses is scored 4.

Popular Responses (P)

(If less than 12 R in record do not score for P)

(1) If the record has 12-15 R,

(a) Less than 4P responses is scored 2.

- (b) Less than 2P responses is scored 4.
- (2) If record has 16-25 R,
- (a) Less than 4P responses is scored 4.
- (b) Less than 2P responses is scored 6.
- (3) If the record has 26 or more R,
- (a) Less than 4P responses is scored 5.
- (b) Less than 2P responses is scored 8.
- (4) If the "animal" P response on card VIII is missed, the score is 3.
- (5) If the "bat" P response on card V is missed, the score is 3.

Sex and Anatomy Content

- (1) 1-2 sex (includes embryo responses) or overt anal responses is scored 5.
- (2) 3 or more sex or anal responses is scored 9.
- (3) More than 3 anatomical responses is scored 3 (does not include bone responses, but does include pelvic responses).

Other Content

- (1) If the "animal" percentage is higher than 60, the score is 3.
- (2) If the "animal" percentage is lower than 30, the score is 4.
- (3) If 5 or more botany responses are present, the score is 3.
- (4) If 4 or more landscape responses are present, the score is 3.
- (5) If 3 or more "food" responses are present, the score is 4.

- (6) If less than 2 "human" responses are present, the score is 5.

- (7) If the number of part "human" responses (Hd) exceeds by 3 to 1 (and at least one H is present) the number of complete "human" responses (H), the score is 5.

Minus Cards

If a card has at least 3 responses and the minus responses exceed the plus responses (no color responses count except FC minus) there is a score of 3, on each such card.

Sex Confusion

If a subject verbalizes obvious conflict about the sexual classification of a person or object

- (a) On at least two responses, the score is 4.
- (b) On three responses, the score is 5.
- (c) On more than three responses, the score is 8.

Bizarre Logic

- (1) A contaminatory response is scored 20.
- (2) A definite pathological DW is scored 10.

Preseveration

If the same response is given on three successive cards and the response in each case is a minus of very poor quality, the score is 15.

• • •

The total *maladjustment* score is equal to the sum of the penalty weights given.

APPENDIX VI

SCORING FOR RORSCHACH LOOSENESS

The following are the *maladjustment* signs (and corresponding weights) used in determining the "looseness" score.

Poor form quality (i.e., low F+).

Confused sequence in order of giving responses.

Contamination or similar kinds of bizarre logic.

Color Naming (CN).

Very poor form quality responses.

Poor quality sexual or anal responses.

Poor quality movement responses.

1 M minus response is scored 2.

2 M minus responses are scored 4.

3 M minus responses are scored 8.

4 M minus responses are scored 10.

Perseveration of any of the kinds described is scored 15.

BIBLIOGRAPHY

1. ALLPORT, G. W. *Personality*. New York: Henry Holt, 1937.
2. ANGYAL, A. F. Speed and pattern of perception in schizophrenic and normal persons, *Character and Pers.*, 1942, 11, 108-127.
3. ANGYAL, A. F. The diagnosis of neurotic traits by means of a new perceptual test, *J. of Psychol.*, 1948, 25, 105-135.
4. BECK, S. J. *Rorschach test. I. Basic processes*. New York: Grune and Stratton, 1944.
5. BENNETT, G. Structural factors related to the substitute value of activities in normal and schizophrenic persons: I. A technique for the investigation of central areas of personality. II. An investigation of central areas of the personality, *Character and Pers.*, 1941, 10, 42-50. 1942, 10, 227-245.
6. CATTELL, R. B. On the measurement of perseveration, *Brit. J. Educ. Psychol.*, 1935, 5, 76-92.
7. CATTELL, R. B. Perseveration and personality: Some experiments and a hypothesis, *J. Ment. Sci.*, 1935, 81, 151-167.
8. DOWNEY, J. *The will-temperament and its testing*. New York: World Book Company, 1923.
9. DUNLAP, K. Improved forms of steadiness tester and tapping plate, *J. Exp. Psychol.*, 1922, 4, 430-433.
10. FREUD, S. *A general introduction to psychoanalysis*. New York: Garden City Publishing Co., Inc., 1943.
11. GOLDSTEIN, K. Concerning rigidity, *Character and Pers.*, 1943, 11, 209-226.
12. GUILFORD, J. P. *An inventory of factors STDCR (Manual of directions and norms)*. Beverly Hills, California: Sheridan Supply Co., 1940.
13. KOUNIN, K. Experimental studies of rigidity, *Character and Person*, 1941, 9, 251-282.
14. LEWIN, K. *A dynamic theory of personality*. New York: McGraw-Hill Book Co., 1935.
15. PINARD, J. W. Tests of perseveration: I, Their relation to character, *Brit. J. Psychol.*, 1932, 23, 5-19.
16. RAPPAPORT, D. *Diagnostic psychological testing*, Vol. 1. New York: New Book Publishers, Inc., 1945.
17. RICKERS-OVSIANKINA, M. Studies of the personality structure of schizophrenic individuals: I. The accessibility of schizophrenics to environmental influences. II. Reaction to interrupted tasks, *J. Gen. Psychol.*, 1937, 16, 153-178, 179-196.
18. RORSCHACH, H. *Psychodiagnostik*. New York: Grune and Stratton, Inc., 1942.
19. ROSENZWEIG, S. The picture association method and its application in a study of reaction to frustration, *J. Person.*, 1945, 14, 3-23.
20. SHAKOW, D. Schizophrenic and normal profiles of response to an auditory apperceptive test, *Psychol. Bull.*, 1938, 35, 647-652.
21. SHAKOW, D., and ROSENZWEIG, S. I. Play technique in schizophrenia and other psychoses. II. An experimental study of schizophrenic constructions with play material, *Amer. J. Ortho-Psychiat.*, 1937, 7, 36-47.
22. SPEARMAN, C. *The abilities of man: Their nature and measurement*. London: The Macmillan Company, 1927.
23. STEPHENSON, W. An introduction to so-called motor perseveration tests, *Brit. J. Ed. Psychol.*, 1934, 4, 188-208.
24. SZONDI, *Experimentelle Triebdiagnostik*. Bern: Verlag Hans Huber, 1947.
25. TERMAN, L. and MILES, C. *Manual of information and directions for use of attitude-interest analysis test*. New York: McGraw-Hill Book Company, Inc., 1938.
26. WERNER, H. Subnormal and abnormal forms of rigidity, *J. Ab. & Soc. Psychol.*, 1946, 41, 15-24.
27. WERNER, H. The concept of rigidity: A critical evaluation, *Psychol. Rev.*, 1946, 53, 43-52.